

206

1 STATE OF MINNESOTA DISTRICT COURT
2 COUNTY OF RAMSEY SECOND JUDICIAL DISTRICT
3 - - - - -

-

4 The State of Minnesota,
5 by Hubert H. Humphrey, III,
6 its attorney general,
7 and

8 Blue Cross and Blue Shield
9 of Minnesota,
10 Plaintiffs,

11 vs. File No. C1-94-8565
12 Philip Morris Incorporated, R.J.
13 Reynolds Tobacco Company, Brown
14 & Williamson Tobacco Corporation,
15 B.A.T. Industries P.L.C., Lorillard
16 Tobacco Company, The American
17 Tobacco Company, Liggett Group, Inc.,
18 The Council for Tobacco Research-U.S.A.,
19 Inc., and The Tobacco Institute, Inc.,
20 Defendants.

21 - - - - -

-

22 DEPOSITION OF HELMUT R. R. WAKEHAM
23 Volume II, Pages 206 - 338

24

25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

207

1 (The following is the continued deposition
2 of HELMUT R. R. WAKEHAM, taken pursuant to
subpoena,

3 at the offices of Robins, Kaplan, Miller & Ciresi,
4 1801 K Street N.W., Washington, D.C., commencing

at

5 approximately 9:06 o'clock a.m., May 30, 1997.

6 APPEARANCES:

7 On Behalf of the Plaintiffs:

8 Corey L. Gordon

9 Robins, Kaplan, Miller & Ciresi LLP

10 Attorneys at Law

11 2800 LaSalle Plaza

12 800 LaSalle Avenue

13 Minneapolis, Minnesota 55402

14 On Behalf of Philip Morris Incorporated:

15 Lonnie D. Nunley, III

16 Hunton & Williams

17 Riverfront Plaza, East Tower

18 951 East Byrd Street

19 Richmond, Virginia 23219-4074

20

21

22

23

24

25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

208

1 Earl J. Silbert and Patricia L. Maher
2 Schwalb, Donnefeld, Bray & Silbert
3 Attorneys at Law
4 1025 Thomas Jefferson Street, N.W.
5 Washington, D.C. 20007
6
7 Peter T. Grossi, Duane J. Mauney
8 Arnold & Porter
9 Attorneys at Law
10 Attorneys at Law
11 555 Twelfth Street, N.W.
12 Washington, D.C. 20004-1206
13
14 Jeffrey G. Weil (Arch litigation)
15 Dechert Price & Rhoads
16 4000 Bell Atlantic Tower
17 1717 Arch Street
18 Philadelphia, Pennsylvania 19103-2793
19 On Behalf of the Defendant CTR:
20 Eric M. Falkenstein
21 Debevoise & Plimpton
22 Attorneys at Law
23 875 third Avenue
24 New York, New York 10022
25 On Behalf of Lorillard Tobacco Company:
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

209

1 Peter T. Shimabukuro
2 Doherty, Rumble & Butler
3 2800 Minnesota World Trade Center
4 30 East Seventh Street
5 St. Paul, Minnesota 55101-4999
6 ALSO APPEARING:
7 Richard M. Sandman (Arch Plaintiffs)
8 Law Offices of Allen Rodman, P.C.
9 Attorneys at Law
10 442 Main Street, Suite 300
11 Malden, Massachusetts 02148-5122
12
13
14
15
16
17
18
19
20
21
22
23
24
25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

210

1 I N D E X
2 EXHIBITS DESCRIPTION PAGE MARKED
3 Plfs' 158 Memo dated November 15,
4 1963, Wakeham to Bavley,

5 Bates 1001881991 215
6 159 Letter dated July 1, 1970,
7 Wakeham to Hockett,
8 Bates 1000320713 219
9 160 Memo dated March 7, 1974,
10 Fagan to Wakeham, Bates
11 1000211075-6 220
12 161 Letter dated November 26,
13 1974, Wakeham to Hausermann,
14 Bates 1001812881 225
15 162 Handwritten notes dated
16 May 19, 1975, Bates
17 1000219884-6 230
18 163 Memo dated August 26, 1977,
19 Fagan to Wakeham, Bates
20 1002367703-4 239
21 164 Memo dated February 22, 1979,
22 Wakeham to Seligman, Bates
23 1003293238-9 249
24
25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

211

1 165 Memo dated January 12,
2 1962, Wakeham to Cullman,
3 Bates 1001882139 257
4 166 Memo dated October 24,
5 1963, Wakeham to Cullman,
6 Bates 2022242310-2 265
7 167 Memo dated February 15,
8 1966, Luchsinger to Wakeham,
9 Bates 1001810121 268
10 168 Memo dated August 29,
11 1966, Luchsinger to list,
12 Bates 1001810221-4 271
13 169 Untitled document, Bates
14 1001609645-70 275
15 170 "EXPERIMENTALLY INDUCED
16 BRONCHITIS, L. Weissbecker -
17 March 22, 1965,"
18 Bates 1001881485-9 279
19 171 Memo dated February 25,
20 1970, Fagan to Wakeham,
21 Bates 1000837391-2 285
22
23 Arch Ex 1 Letter dated May 23, 1997,
24 Shub to Maher, with
25 attached subpoena 335

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

212

1	WITNESS	EXAMINATION BY	PAGE
2	Helmut R. R. Wakeham	Mr. Gordon	213
3	Mr. Nunley		296
4	Mr. Falkenstein		313
5	Mr. Gordon		324
6	Mr. Silbert		329
7			
8			
9			

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

213

1 P R O C E E D I N G S

2 (Witness previously sworn.)

3 HELMUT R. R. WAKEHAM

4 called as a witness, being previously

5 sworn, was examined and testified as

6 follows:

7 ADVERSE EXAMINATION (cont'd)

8 BY MR. GORDON:

9 Q. Good morning, Dr. Wakeham.

10 A. Good morning.

11 Q. In your tenure as director of research and

12 vice-president of research and development for

Philip

13 Morris, did you ever express to anyone concerns
about

14 the level of lawyer involvement in making research
15 decisions?

16 A. You mean whether I approved or disapproved of
17 it, or --

18 Q. Let's start with that.

19 A. No, I don't think --

20 I don't recall any discussion with management

21 requesting that the lawyers refrain from, you
know,

22 exhorting me with regard to their problems with

23 respect to the litigation and all that.

24 Q. My question is a little more broad than that.

25 Had --

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

214

1 Did you ever express to anyone, co-workers,

2 fellow scientists, friends, your concern that
lawyers

3 were too involved in making research decisions for
4 the cigarette industry?

5 A. No, sir, I don't -- I don't think I felt that
6 way.

7 Q. You thought that it was okay --

8 A. I thought it was appropriate for them to
express

9 their views, and I expressed mine. We had

10 interchanges. But I don't believe that I felt at
any

11 time that they were being unduly oppressive or
12 restrictive with respect to what we were doing.

13 Q. Did you feel that it was appropriate that
14 lawyers be involved in making scientific research
15 decisions?

16 MR. SILBERT: Object, vagueness.

17 MR. NUNLEY: Objection, foundation.

18 A. I wouldn't say they made scientific
decisions,

19 not during my tenure anyway.

20 Q. So it's your testimony here that during your
21 entire tenure at Philip Morris, you never
expressed

22 concerns to anyone about lawyers being involved in
23 making scientific research decisions.

24 MR. SILBERT: I -- I object. I -- I

25 don't -- I think it mischaracterizes what the
witness

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

215

1 had testified to in response --

2 MR. NUNLEY: Objection.

3 MR. SILBERT: -- to previous questions.

4 MR. NUNLEY: Objection as to form.

5 A. It was a long time ago, and I wouldn't say
that

6 I never did it; I don't recall any instances.

7 Q. Okay.

8 (Plaintiffs' Exhibit 158 was marked
9 for identification.)

10 MR. NUNLEY: Corey, can this gentleman
11 identify himself for the record? I don't know who
he

12 is.

13 MR. GORDON: He's one of your guys.

14 MR. NUNLEY: Well I still don't know who he
15 is.

16 MR. GORDON: Why --

17 MR. SHIMABUKURO: Peter Shimabukuro for
18 Lorillard.

19 MR. GORDON: For whom?

20 MR. SHIMABUKURO: Lorillard.

21 MR. GORDON: I thought you said you were
22 from Dorsey.

23 MR. SHIMABUKURO: No, Doherty.

24 MR. GORDON: Oh, I'm sorry. I misheard
25 you.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

216

1 Thank you. I'm glad you -- I apologize, Chip.

2 I thought he said Dorsey, so I assumed you knew
him.

3 BY MR. GORDON:

4 Q. Showing you Exhibit 158, memorandum bearing

5 Bates stamp number 1001881991, dated November 15,

6 1963, this is a memo from you to Dr. Bavley;
correct?

7 A. Yes, sir.
8 Q. Dr. Bavley was some -- a scientist reporting
to
9 you?
10 A. Yes, sir.
11 Q. Okay. And in this memo you told Dr. Bavley
12 that, quote, "...the lawyers have taken exception
to
13 my statement that the cardiovascular problems, if
14 any, are related essentially to the physiological
15 effects of nicotine." Do you see that line?
16 A. I see the line, yes.
17 Q. And that was your view in 1963, that
18 cardiovascular problems, if any, were related
19 essentially to physiological effects of nicotine;
20 correct?
21 MR. NUNLEY: Object. Objection as to form.
22 A. I believe this states fairly what I felt at
the
23 time, yes.
24 Q. Which lawyers took exception to that
statement?

25 A. I don't recall.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

217

1 Q. What was the scientific basis for their
taking

2 exception to it?

3 MR. SILBERT: That assumes facts not in
4 evidence.

5 MR. NUNLEY: Objection.

6 MR. SILBERT: Objection.

7 A. I don't recall. I don't recall the
8 circumstances of this memorandum.

9 Q. Do you recall being concerned that lawyers
were

10 taking exception to your scientific analysis?

11 A. Well I wouldn't call it an analysis. They
may

12 have taken exception to my -- what I said where I
13 expressed the opinion that cardiovascular problems
14 were related essentially to nicotine rather than

to
15 other constituents in the smoke.

16 Q. Do you consider the relationship, if any,
17 between cardiovascular problems and the
physiological

18 effects of nicotine to be an area of legal
19 expertise?

20 MR. NUNLEY: Objection, vague.

21 MR. SILBERT: Yeah. I object to the
22 question. The question's not -- witness is not
23 qualified to answer that question.

24 A. I don't know whether it's considered
expertise

25 on the part of the lawyers or not.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

218

1 Q. Do you consider it in an area of scientific

2 expertise?
3 MR. NUNLEY: What --
4 A. Well that's pretty broad.
5 MR. SILBERT: I object on grounds of
6 competency.
7 A. What is "expertise?" In -- in terms of -- of
an
8 attorney, some lawyers may be quite expert in
certain
9 areas of science.
10 Q. Okay. Just so it's clear, you -- I want you
--
11 I want to be clear so that the jury understands
12 that you don't, as you sit here today, have an
13 opinion as to whether -- the question of whether
14 cardiovascular effects are related to the
15 physiological effects of nicotine is a scientific
16 question or a legal question.
17 MR. NUNLEY: Object to --
18 A. I was --
19 MR. SILBERT: Well I object, vagueness,
20 conclusory, competency.
21 A. I would take the position that the
22 cardiovascular effects of nicotine were primarily
a
23 scientific issue rather than a legal question.
24 Q. Okay. Thank you.
25 Who was Robert Hockett?
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

219
1 A. Robert Hockett was assistant -- or associate
2 scientific director of The Council for Tobacco
3 Research.
4 (Plaintiffs' Exhibit 159 was marked
5 for identification.)
6 BY MR. GORDON:
7 Q. Showing you Exhibit 159, document bearing
Bates
8 stamp number 1000320713, letter dated July 1st,
1970,
9 this is a letter from you to Dr. Hockett; correct?
10 A. It would appear to be so, yes.
11 Q. And you're discussing a conference on the
12 effects of nicotine and/or smoking on the central
13 nervous system; correct?
14 A. That would be implied by the first sentence,
15 yes.
16 Q. Okay. And you tell him that you propose to
stay
17 far away from the psycho-pharmacological field; is
18 that correct?
19 MR. NUNLEY: Objection. Objection as to
20 form.
21 A. Yes. I don't recall the circumstances of
this
22 conference.
23 Q. Who was R. Fagan?
24 A. Ray Fagan was a principal scientist at the
25 Research Center whose function was kind of an
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

220

1 in-house advisor and source with respect to
2 epidemiological and medical information.

3 Q. He had a DVM; didn't he?

4 A. Yes.

5 Q. Doctor of Veterinary Medicine?

6 A. Yes.

7 Q. So he was Dr. Fagan.

8 A. Dr. Fagan, right.

9 MR. GORDON: Can I have that marked,
10 please.

11 (Plaintiffs' Exhibit 160 was marked
12 for identification.)

13 BY MR. GORDON:

14 Q. Showing you Exhibit 160, bearing Bates stamp
15 number 1000211075 through 076, memorandum dated

March

16 7, 1974. This is a memo from Dr. Fagan to you;
17 correct?

18 A. It would appear to be so, yes.

19 Q. And it bears your received stamp in the upper
20 right-hand corner?

21 A. Yes, sir.

22 Q. Okay. And in this memo Dr. Fagan, in
paragraph

23 one, states that "...concern has been expressed
24 concerning the moral obligation of Philip Morris

(and

25 perhaps the tobacco industry) to reveal to the FTC
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

221

1 the fact that some cigarette smokers may be
getting

2 more tar than the FTC rating of that cigarette."

3 MR. SILBERT: Doctor, if you would just
4 take a moment to review the document before
5 responding to the question, please.

6 MR. NUNLEY: Corey, while he's doing that,
7 let me just state for the record, I appreciate the
8 effort you're making to move through your
questioning

9 within the time constraints, but I would ask you,
if

10 you can, to try to give Dr. Wakeham a chance to
look

11 at the documents you're handing him.

12 MR. GORDON: Sure.

13 MR. NUNLEY: I would appreciate it. Thank
14 you.

15 A. Yes, sir. What is the question, please?

16 Q. The question is: In this memo to you Dr.

Fagan

17 says that, quote, "Some concern has been expressed
18 concerning the moral obligation of Philip Morris

(and

19 perhaps the tobacco industry) to reveal to the FTC
20 the fact that some cigarette smokers may be

getting

21 more tar than the FTC rating of that cigarette."

22 A. Yes.

23 Q. Okay. And it says that "You," meaning Dr.
24 Wakeham, "mentioned in your presentation at the
25 Center on Tuesday, March 5th, that such concern
was

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

222

1 voiced in New York at your talk there. And it was
2 expressed again by some individuals who heard you
in

3 Richmond." See that?

4 A. Yes, sir.

5 Q. And that would be people in the Philip Morris
6 headquarters in New York who expressed that
concern?

7 A. I'm not sure. I don't recall the
circumstances

8 referred to here.

9 Q. Okay. And Dr. Fagan, in paragraph two,
doesn't

10 think that there is a need to reveal this
information

11 to the FTC because it is obvious that HEW, or
Health,

12 Education & Welfare, knows that smokers can vary
13 their intake; correct?

14 A. Yes.

15 Q. Did Philip Morris ever reveal to the FTC the
16 fact that some cigarette smokers may be getting
more

17 tar than the FTC rating of the cigarette?

18 MR. NUNLEY: Objection, foundation,
19 speculation.

20 A. I'm not --

21 MR. SILBERT: Can we have a timeframe on
22 that question?

23 MR. GORDON: Ever in the history of Philip
24 Morris.

25 A. Well --

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

223

1 MR. SILBERT: I object to competency to
2 answer that question.

3 A. I --

4 Of course "in the history of Philip Morris,"
5 it's a long time, but let me say that I recall in
the

6 discussion we had with the Federal Trade
Commission

7 with regard to the standardized smoking test, they
8 were aware and we were aware that smokers smoked
9 differently, that some people obtained more smoke
10 from a cigarette than others. Now that's the --
11 that's the question which is brought up in this
12 memorandum, as I understand it.

13 It was necessary, in order to perform a
14 comparative test which the Federal Trade
Commission

15 wanted to set up, that an arbitrary standard
method

16 of smoking be employed in the smoking machines so
17 that Cigarette A could be compared with Cigarette
B.

18 This is what was being done in the so-called tar
19 derby which you alluded to earlier. And the
problem

20 in the early days was that different companies
were

21 using different methods. So when the Federal
Trade

22 Commission proposed a standardized method and a
23 program to test cigarettes with -- relative to
each

24 other, samples that were picked up from the
market,

25 it was necessary to establish some arbitrary set
of

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

224

1 conditions for that smoking test so that
comparisons

2 could be properly made so that you wouldn't be
3 comparing apples with oranges.

4 Q. And that was done in the early 1960s;
correct?

5 A. Yes, it was. In the middle 1960s, I think,
6 was --

7 The Federal Trade Commission set up their
8 program, I think, in '66 or '67, as I recall it.

9 Q. Okay. And in 1974, what was the nature of
the
10 concern that was being expressed about the moral
11 obligation of Philip Morris to reveal to the FTC
the
12 fact that some cigarette smokers may be getting
more

13 tar --

14 MR. SILBERT: Object. It's not the
15 witness's memorandum.

16 MR. GORDON: My question wasn't done,
17 counsel. I'd appreciate it if you'd wait until
I'm

18 done with my question.

19 MR. SILBERT: Oh, excuse me. I thought you
20 had finished.

21 MR. GORDON: Let me -- let me re-ask the
22 question.

23 Q. In 1974, what was the nature of the concern
that
24 was being expressed concerning the moral
obligation

25 of Philip Morris to reveal to the FTC the fact
that

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

225

1 some cigarette smokers may be getting more tar
than

2 the FTC rating of that cigarette?

3 MR. NUNLEY: Objection as to foundation.

4 A. I'm sorry, I don't recall the origin of the
5 concern -- of the nature of the concern.
6 Q. Okay. Who is Dr. Max Hausermann?
7 A. Dr. Max Hausermann was the head of research
at
8 the laboratory we had at Fabriques Tabac Reunies
in
9 Switzerland, and he later became vice-president
R&D
10 at the Richmond laboratory.
11 Q. The Fabriques Tabac Reunies, was that also
known
12 as Philip Morris Europe?
13 A. Well it was the laboratory in Neuchatel,
which
14 was part of Philip Morris Europe.
15 (Plaintiffs' Exhibit 161 was marked
16 for identification.)
17 BY MR. GORDON:
18 Q. Showing you Exhibit 161, bearing Bates stamp
19 number 1001812881, a letter dated November 26,
1974,
20 this is a letter from you to Dr. Hausermann;
correct?
21 A. Yes, sir.
22 Q. I'm curious. Why is it addressed to Philip
23 Morris Europe in Lausanne, Switzerland?
24 A. I'm sorry, I can't answer that question.
25 Q. Was there a period of time when research was
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

226
1 being done in Lausanne?
2 A. No, sir. But Dr. Hausermann was active in
3 various programs over there, and I don't know the
4 relationship between him and the people at the
5 European headquarters in Lausanne.
6 Q. In 19 --
7 A. They were -- they were only a few miles
apart.
8 Q. In 1974 was Dr. Hausermann the head of the
FTR
9 laboratory?
10 MR. NUNLEY: Objection, foundation.
11 A. I'm not certain about that. I don't know the
12 dates.
13 I know that he was head. There were a number of
14 other people there. In fact, there were even one
or
15 two people from Richmond who were in the
laboratory.
16 I'm not familiar with the organizational structure
17 that they had.
18 Q. This letter, Exhibit 161, was your response
to
19 Dr. Hausermann's request for information on
smoking
20 patterns; correct?
21 A. Well if you'd pardon me, I have to read the
22 letter.
23 Yes, sir, what is the question now?
24 Q. Okay. You were responding to Dr.

Hausermann's

25 request for information on smoking patterns;
correct?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

227

1 A. I --

2 Apparently there was a request, yes.

3 Q. And you reminded Dr. Hausermann in this
letter

4 of information that you had presented in Lausanne;

5 correct?

6 A. Yes. I don't recall the circumstances, but

--

7 Q. Okay. And you told Dr. Hausermann, quote,
"It

8 is true that a particular individual appears to
have

9 some kind of consistent puff profile, but it is
also

10 true that individuals change the duration and
volume

11 of their puffs when they make radical changes in
the

12 types of cigarettes being smoked," close quote.

You

13 told him that; correct?

14 MR. NUNLEY: Objection as to form.

15 A. Well our experience was that if the -- that

--

16 First place, our experience was that people --

17 no two people smoked alike. We measured puff

18 patterns for individual smokers, and in -- in a

19 hundred smokers, for example, there were no two

20 patterns that were similar. The patterns that we
got

21 were similar to the type of thing you observed in

--

22 in an electrocardiogram where you -- you get some

23 kind of a pattern of the rate at which the
individual

24 draws on the cigarette as a function of time. No
two

25 people smoke the same way. People develop certain

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

228

1 habit patterns for puffing, and if they are now
given

2 a cigarette which has a different delivery, a

3 radically different delivery, they are recognizing

a

4 difference in the smoke which they're receiving,

and

5 they make some changes in their puffing pattern as

a

6 result of that recognition.

7 Q. Okay. And the specific example you give in

8 Exhibit 161 of that is that if a Marlboro smoker

--

9 A. Yes.

10 Q. -- smokes a Carlton, the Marlboro smoker will
11 take a much longer puff when smoking Carlton;
12 correct?
13 A. That's what I said in the letter, yes. I
14 believe that to be true.
15 Q. And Carlton was a low-delivery cigarette.
16 A. Very low, five milligrams, with a high degree
of
17 dilution of the smoke.
18 Q. So in other words, if a Marlboro smoker --
19 A. Who was accustomed to, say, 18 milligrams of
20 delivery, would now smoke a cigarette with five
21 milligrams' delivery, he -- initially he would
puff
22 that differently.
23 He would probably develop a new and different
24 puffing pattern if he consistently smoked Carlton
25 after that, probably changing the pattern
gradually

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

229

1 over a period of one or two weeks of smoking.
2 Q. You don't say anything in your Exhibit 161
about
3 it being limited to one or two weeks; do you?
4 A. No.
5 Q. Okay. Now when a smoker takes a longer puff
on
6 a cigarette, they're getting more tar and
nicotine.
7 MR. NUNLEY: Objection.
8 Q. Correct?
9 MR. NUNLEY: Objection, foundation.
10 A. Well you're saying longer than if he took a
11 shorter puff.
12 Q. Right.
13 A. Yes. Well I think that's more or less
obvious.
14 If you are smoking a cigarette and you take a
short
15 puff, you get less than if you take a long puff.
16 Q. And this specific example that you give to
Dr.

17 Hausermann of a Marlboro smoker taking a much
longer
18 puff when smoking a cigarette like Carlton, that
was
19 based on research data that Philip Morris had
20 developed; correct?
21 A. Yes.
22 Q. Okay. And in 1974 you told Dr. Hausermann
that
23 you preferred not to release that data just yet;
24 correct?
25 A. I --

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

230

1 Yes. But I don't know what is meant by
2 "release." Release to whom? I don't understand

the
3 context of the -- the word "release" here.
4 Q. All right.
5 A. Something else was going on here.
6 Q. In the next sentence you say, "Eventually we
may
7 publish it but until then we're not giving it out
to
8 our competitors." Do you see that?
9 A. Yes.
10 Q. So you were telling Dr. Hausermann that you
11 didn't want to publish this information in 1974;
12 right?
13 A. Well I'm not sure.
14 MR. SILBERT: I object to the phrasing of
15 that question in light of the memo. I -- I don't
16 think it fairly characterizes what the doctor
said.
17 I respectfully object.
18 A. I'm not sure what the import is of the last
19 paragraph in the letter that contains that
20 statement. I don't under -- I don't recall the
21 circumstances.
22 Q. Did you ever publish the data?
23 A. I don't know.
24 (Plaintiffs' Exhibit 162 was marked
25 for identification.)
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

231
1 BY MR. GORDON:
2 Q. Dr. Wakeham, I'm showing you Exhibit 162, a
3 document bearing Bates stamp number 1000219884,
4 series of pages -- handwritten pages entitled "PM
USA
5 Management Review May 19, 1975."
6 These are your handwritten notes; aren't they?
7 A. Well I'm not sure of the first page. May be
my
8 handwritten notes. I -- I haven't seen this
document
9 for -- since I wrote it, I guess.
10 Q. You're not sure if these are your handwritten
11 notes or not?
12 A. I don't recognize the notes, but I wouldn't
say
13 categorically that they're not my handwriting.
14 Q. I draw your attention in particular to the HW
at
15 the --
16 A. Yes, sir.
17 Q. -- upper right-hand corner.
18 A. Uh-huh.
19 Q. It looks to me like your characteristic HW.
20 A. Okay. All right.
21 Q. And it appears again on -- well there's --
22 On page three and number three, the H there also
23 looks to me like the H I've seen on a number of
your
24 handwritten documents.
25 A. All right. I'm willing to stipulate that I
STIREWALT & ASSOCIATES

232

1 wrote the --

2 Q. Okay. And -- and if it helps you at all,
we've

3 been told by Philip Morris that these were found
in

4 Wakeham/Karol Sharp's office.

5 A. I see.

6 Q. Why don't you take a moment to review these
7 because I have a couple questions about them.

8 A. Yes, sir. What is the question?

9 Q. Okay. This was a -- notes that you took of a
10 meeting of senior management people; correct?

11 A. It would appear so. I don't recognize all
the

12 initials that are on here; it's been 22 years
since

13 this was done.

14 Q. Well let's see if we can recognize some of
15 them. CHG was Clifford Goldsmith; right?

16 A. Yes.

17 Q. And SSP would have been S. Ross?

18 MR. SILBERT: I'm sorry?

19 Q. Excuse me.

20 A. I don't --

21 Q. Strike that. We don't know who SSP is; do
we?

22 A. That's right.

23 Q. Apparently neither did Philip Morris.

24 JL is Jet Lincoln?

25 MR. SILBERT: I move to strike that last
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

233

1 comment.

2 A. Probably.

3 Q. WM was W. McDowell?

4 A. Maybe.

5 Q. Can --

6 Is that MB, the next one?

7 A. Yes.

8 Q. Any idea who that is?

9 A. No.

10 Q. RF is R. Fagan?

11 A. Could be.

12 Q. Any idea who BS is?

13 A. No, sir.

14 Q. And HW is you.

15 A. Yes.

16 Q. Okay. Now this was not unusual for this
group

17 of people to get together and have a periodic
review

18 of Philip Morris activities, correct?

19 MR. SILBERT: I object.

20 MR. NUNLEY: Objection.

21 MR. SILBERT: Are you finished?

22 MR. GORDON: (Nodding.)

23 MR. SILBERT: I object, lack of foundation

24 in light of witness's inability to recall members

who

25 were there -- some members who were present.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

234

1 MR. GORDON: You know, Mr. Silbert, I

2 really think you're going beyond the scope of the
3 order. You know, you could have stopped at "lack

of

4 foundation." That's -- that's what the court

order

5 calls for. When you go on and say "in light of

6 witness's inability to recall members who were
there

7 or some members who were present," that's
bordering

8 on -- real close to the kind of prompting the Case
9 Management Order has prohibited.

10 Again, I've put up with it --

11 MR. SILBERT: Well --

12 MR. GORDON: Let me finish, please. I've

13 put up with it in the interests of moving this

14 along. I know you're under some significant time

15 constraints and I'm trying to accommodate that,
but I

16 really do believe you're going beyond the -- the

17 scope of the Case Management Order. "Lack of

18 foundation" is a simple explanation of your -- of
the

19 basis of your objection, and that's all you need

to

20 say.

21 MR. SILBERT: I respectfully disagree with

22 you.

23 MR. WEIL: Objection, vague.

24 A. Well where were we?

25 Q. This was not unusual for this group of people
to

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

235

1 get together and have a periodic review of Philip
2 Morris activities; correct?

3 MR. NUNLEY: Same objections.

4 A. I don't recall that we -- we had this group

5 meeting regularly to discuss topics that seem to
be

6 referred to here.

7 1975. I have no -- no recollection of this

8 meeting.

9 Q. Draw your attention to page three, --

10 A. Yes, sir.

11 Q. -- the very bottom of the page where it --

12 A. Yes, sir.

13 Q. -- says "Nicotine Levels - versus FTC tars,

PM

14 versus RJR." Do you see that?

15 A. Yes, sir.

16 Q. And it says, "We are lower." Do you see
that?

17 A. Yes, sir.

18 Q. And then it says, "Puff counts, 8.8" and then
19 "9.2."
20 A. Yes, sir.
21 Q. Do you recall that Philip Morris cigarettes
had
22 a puff count of 8.8 versus RJR having a puff count
of
23 9.2?
24 MR. NUNLEY: Objection, foundation and
25 vague.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

236
1 A. I don't recall that. Details of that sort
2 didn't, you know, reside in my mind.
3 Q. Okay. And the next line says, "Adjust to
make
4 same puff." Do you know what that refers to?
5 A. Well this was comments by Jet Lincoln, if --
if
6 the initial JL is correct, and he's proposing that
7 we -- if there is this difference between puffs,
and
8 I don't know whether this is an average difference
or
9 a difference between, say, Marlboro/Winston, which
10 were probably main competitors, was 8.8 versus
9.2,
11 but it would appear that he's suggesting that we
12 adjust things so that they are the same number of
13 puffs in the standard smoking machine.
14 Q. And you wrote, off on the left, "Check how to
15 reduce difference." See that?
16 A. Yes.
17 Q. Did --
18 Did you do anything to check how to reduce
19 difference?
20 A. I don't recall.
21 Q. Okay. And do you see the next line, "Will
this
22 improve nicotine?" Do you see that, --
23 A. Yes.
24 Q. -- with a question mark?
25 And then down at the bottom it says "J.L. looks
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

237
1 at 1.3 nicotine as ideal." Do you see that?
2 A. Yes.
3 Q. "1.3 nicotine" means 1.3 milligrams of
nicotine?
4 A. I would assume so.
5 Q. How many milligrams of nicotine did Marlboro
6 have?
7 A. I don't recall.
8 Q. 1.3 would be considered a high-delivery
9 cigarette, medium-delivery?
10 MR. NUNLEY: Timeframe, Corey?
11 MR. GORDON: Back in 1975.
12 MR. WEIL: Objection.
13 A. Well as I recall it, 1.3 would be considered

14 about the appropriate level for the level of tar
15 which Marlboro was delivering in those days. It
was
16 in the 15- to 18-milligram range, as I recall it,
and
17 that is -- and -- and so 1.3 milligram would be
18 about, what, .7 or .8 ratio? No. Seven percent
or

19 eight percent of the tar delivery. That would be
20 about right.

21 Q. My question --

22 Well I -- I mean you no disrespect. I move to
23 strike that answer.

24 A. No, no. Go ahead.

25 Q. My question is: Back in the 1975 timeframe,
was

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

238

1 1.3 milligrams of nicotine considered a high
delivery

2 of nicotine, a medium delivery of nicotine, a low
3 delivery of nicotine?

4 MR. NUNLEY: Considered by whom?

5 MR. WEIL: Objection.

6 MR. NUNLEY: Objection.

7 MR. SILBERT: I object, the question is
8 vague.

9 A. Well I think you ought to specify with
respect

10 to what cigarette we're talking about. 1.3, for
11 example, in our previous conversation, would be
high

12 for a Carlton but it wouldn't be high for a
Marlboro

13 in nineteen seventy -- what, '75?

14 Q. So in 1975 you didn't differentiate
cigarettes

15 on the basis of their delivery with phrases like
16 high, medium and low; is that correct?

17 A. No, I don't recall that we made efforts to
18 classify them as high, medium or low in relation
to

19 tar delivery. All --

20 Q. I'm not -- I'm not asking in relation to tar
21 delivery. If that's -- if that's the confusion,
then

22 let me clarify that.

23 A. Well --

24 Q. I'm just asking in general, if you took a
25 Carlton, would you call that a high-delivery

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

239

1 cigarette or a low-delivery cigarette?

2 A. Well that's a low-delivery cigarette.

3 Q. All right. And was Marlboro in 1975
considered

4 a low-delivery cigarette?

5 A. That's what you --

6 You have to refer to it in a relative sense.

7 Compared to 1960? Yes, it's low.
8 Q. No.
9 A. Compared to 1975? Marlboro would be right in
10 the middle of the range.
11 Q. So you would have considered it a medium-
12 delivery cigarette.
13 A. Yes.
14 Q. And my question is: On nicotine delivery,
was
15 1.3 in 1975 considered medium?
16 MR. SILBERT: Asked and answered.
17 A. With --
18 For all cigarettes, or for Marlboro?
19 Q. For all cigarettes.
20 A. I --
21 As I recall it, it would be about the middle of
22 the range, yes.
23 (Plaintiffs' Exhibit 163 was marked
24 for identification.)
25 BY MR. GORDON:
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

240
1 Q. Showing you Exhibit 163, bearing Bates stamp
2 number 1002367703 through 704, memorandum dated
3 August 26, 1977. This is a memo from Dr. Fagan to
4 you; correct?
5 A. Yes, sir.
6 Q. I'm only going to ask you questions about
7 paragraphs two and three, but if you want to read
the
8 whole document, please feel free.
9 Directing your attention to paragraph two, the
10 first two lines that say, "Tobacco is more than
just
11 pleasure. Smokers have learned to rely on that"
--
12 excuse me, "rely on it." Do you see the -- those
two
13 sentences?
14 A. Yes, sir.
15 Q. Did you agree with those two statements back
in
16 1977?
17 A. Well I don't know whether I agreed or
18 disagreed. My -- my view is that when I say
"Smokers
19 have learned to rely on it," they have --
20 (Mr. Silbert directs witness to portion
21 of Exhibit 163.)
22 THE WITNESS: Where?
23 MR. SILBERT: This is Mr. Fagan's
24 memorandum.
25 THE WITNESS: Oh.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

241
1 MR. GORDON: I'm -- I'm going to object to
2 that interruption of the witness's testimony and
3 instruction to him. I think it's clearly beyond
the

4 scope of the judge's order.
5 MR. SILBERT: Well I don't think you want
6 the witness to give an inaccurate answer based on
7 some misimpression on his part, counsel. I'm sure
8 you don't want that.
9 MR. GORDON: I'm asking him his opinion in
10 1977. He was starting to give it to me, counsel,
11 when you interrupted him and -- and pointed and
gave
12 him a clear instruction to change his testimony,
13 which is clearly improper.
14 MR. SILBERT: Only insofar as he mis -- had
15 a misimpression as to who the writer of the
16 memorandum was, to correct --
17 MR. GORDON: If he has a misimpression, --
18 MR. SILBERT: -- to correct a fact.
19 MR. GORDON: -- counsel, you can correct
20 that on cross-examination. You can't interrupt
his
21 testimony when he's on the witness stand
testifying
22 in front of a jury in St. Paul, Minnesota, which
is
23 what he's doing now.
24 MR. SILBERT: Counsel, I am certain you
25 don't want any testimony based here on
misimpressions
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

242
1 and misunderstandings that were honest in nature.
2 MR. GORDON: And I also don't want
3 testimony based on coaching from counsel.
4 MR. SILBERT: I object to that
5 mischaracterization of what I was doing. You
should
6 not make statements like that, counsel.
7 MR. GORDON: Well I -- that I believe is
8 what the record reflects very clearly.
9 THE WITNESS: Would you please ask the
10 question again?
11 MR. GROSSI: Can I -- I don't -- I don't
12 mean to interrupt at all. I just wonder if we
could
13 go back and have the question read as asked.
14 MR. GORDON: My question --
15 MR. GROSSI: You seem to be searching on
16 the computer. Is that what you're doing?
17 MR. GORDON: Yup.
18 MR. GROSSI: Thank you.
19 MR. GORDON: My question --
20 And again, I'm going to have to object to more
21 than one Philip Morris lawyer being involved in
the
22 deposition.
23 MR. GROSSI: I -- I'm sorry. I missed the
24 question. I'm not objecting. I would just like
the
25 courtesy of having it reread, which you apparently
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

243

1 are doing.

2 MR. GORDON: I understand that, counsel. I
3 tolerated it yesterday, but the point is if I'm
going

4 to have a phalanx of Philip Morris lawyers, I'm
5 entitled to have only one speaking during the
6 deposition itself. Because all -- all -- all of
you

7 may have questions or you didn't hear something or
8 you want something reread. That may be. But
you're

9 entitled to only have one person actively
10 participating in this deposition.

11 MR. GROSSI: Counsel, if you don't want to
12 extend that courtesy, I will simply ask that -- if
I

13 could have a moment to ask Mr. Nunley from time to
14 time to put a question to you. I'm -- I'm sorry,
I

15 don't mean to interrupt your examination.

16 MR. NUNLEY: Let -- let me take care of
17 it. All right, Corey? First of all, there's not
a

18 phalanx here. I think -- I think that there are
19 three of us, three Philip Morris lawyers in -- in
the

20 Minnesota case. There's another Philip Morris
lawyer

21 here that's for Arch, just for the record. But if
--

22 if you've got a problem with other lawyers
speaking,

23 my colleagues, I'll deal with it. I've heard you
and

24 I'll take care of it.

25 MR. GORDON: I mentioned it yesterday.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

244

1 MR. NUNLEY: I --

2 MR. GORDON: Okay.

3 MR. NUNLEY: Peter, come up here. I've got

4 a -- I want you to sit next to me so --

5 MR. GROSSI: That's fine. I -- I just

6 won't ask for things to be repeated.

7 MR. GORDON: Let's move on.

8 MR. GROSSI: I'm very sorry. I apologize,

9 Mr. Gordon.

10 BY MR. GORDON:

11 Q. After all that, Dr. Wakeham, we'll go back to
12 Exhibit 163, line two -- or paragraph two, the
line

13 that says, "Tobacco is more than just pleasure.
14 Smokers have learned to rely on it." And my

15 question, sir, is: In 1977, did you agree with
those

16 two statements?

17 MR. NUNLEY: Objection to form. It's
18 compound.

19 A. Well I wouldn't agree with it the way it's
20 stated.

21 Q. Okay. Did you send a memo back to Mr. Fagan
22 disagreeing with those?
23 A. I don't recall it.
24 Q. Direct your attention to paragraph three on
25 Exhibit 163. Do you see the very bottom line of
that

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

245

1 that says, quote, "Cocaine is very pleasurable,
not

2 addicting, but illegal." See that line?

3 A. I see the line, yes.

4 Q. In 1977 did you believe that cocaine was not
5 addicting?

6 A. I don't recall that I had an opinion on
cocaine.

7 Q. In 19 --

8 In 1977 was the prevailing view at the Philip
9 Morris research and development department that
10 cocaine was not addicting?

11 MR. NUNLEY: Objection as to form,
12 speculation, foundation.

13 A. I can't say what the prevailing was --
opinion

14 was.

15 Q. As you sit here today, do you have an opinion
as

16 to whether or not cocaine is addicting?

17 MR. SILBERT: Objection, competency.

18 A. I think this enters into the question of what
is

19 addiction, but --

20 Apparently it is the common belief that cocaine
21 is -- is addictive. I think it's common belief.

22 Q. My question is, sir, do you have a scientific
23 opinion?

24 A. No, I don't have a scientific opinion on it.

25 Q. I take it you don't have an opinion, either,
on

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

246

1 whether nicotine is addicting either then;
correct?

2 A. I think that again enters into the question
of

3 what is addiction. If -- if you would tell me
what

4 you con -- you believe would be the meaning of the
5 word "addiction," I will try to answer the
question.

6 Q. The meaning --

7 The definition of addiction that I want you to
8 use is whatever definition you were using when you
9 told me that you don't have an opinion as to
whether

10 or not cocaine is addictive.

11 MR. SILBERT: I object to that question.

12 MR. NUNLEY: I also object as to the
13 relevance of this line of inquiry.

14 A. I -- I'm not an authority on addiction, but
in
15 my earlier thoughts with regard to the question of
16 nicotine addiction, "addiction" had certain
17 definitions and parameters related to it which
18 nicotine did not fit, in my opinion.
19 Now in the course of time, the manual put out by
20 the American Psychiatric Association has greatly
21 changed the definition. In fact, as I understand
it,
22 they have disagreed so much on the meaning of
23 "addiction" that they have eliminated the use of
the
24 term in the manual. They're now speaking of
25 substance abuse rather than addiction. And I
think

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

247

1 it's because they couldn't agree among themselves
as

2 to what really was addiction.

3 My -- my problem with regard to this whole
4 subject is: At what point does a habit become an
5 addiction? For example, there was an article in
6 Science not a month or two ago where it speaks of
7 people becoming addicted to Internet. What does
it

8 mean to be addicted to the Internet?

9 Q. Again, I mean you no --

10 A. These were psychologists who were making this
11 comment or study.

12 Q. Again, I mean you no -- no disrespect, but I
13 move to strike as non-responsive.

14 MR. NUNLEY: Well Corey, I -- I disagree
15 with you. You asked an open-ended question and I
16 think it was responsive to your open-ended
question.

17 THE WITNESS: I don't understand what was
18 said.

19 MR. SILBERT: It's lawyer talk.

20 THE WITNESS: Yeah.

21 MR. GORDON: And -- and unnecessary lawyer
22 talk at that.

23 Q. My question, sir, is: As you sit here today,
24 you have testified that you don't believe yourself
25 competent to render an opinion as to whether or
not

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

248

1 cocaine is addicting; correct?

2 A. Yes.

3 Q. And my question is: Do you have enough
4 competence to render an opinion as to whether or
not

5 nicotine is addicting?

6 MR. SILBERT: I object, asked and
7 answered.

8 MR. NUNLEY: Objection as to relevance.

9 A. You're asking me --

10 (Discussion off the stenographic record.)
11 A. You're asking me to --
12 I'm sorry. Would you repeat the question
13 again? I've lost the whole train of thought.
14 Q. Sure.
15 Do you have enough competence to render an
16 opinion as to whether or not nicotine is
addicting?
17 MR. SILBERT: Same objection.
18 MR. NUNLEY: Same here also.
19 A. I have a problem with what you mean by the
word
20 "competence." I am not an authority on addiction.
21 It -- it's -- it's something that I have talked
about
22 and discussed for 25 years with people. I'm not
23 competent to make a definitive statement with
regard
24 to what is addiction or what is not an addiction.
25 Q. And that would apply to nicotine as well;
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

249
1 correct?
2 A. Yes.
3 Q. Okay.
4 (Discussion off the stenographic record.)
5 (Plaintiffs' Exhibit 164 was marked
6 for identification.)
7 BY MR. GORDON:
8 Q. I'm showing you Exhibit 164. It bears Bates
9 stamp number 2048008889 through 90. It also
appears
10 to have another Bates stamp number, and I can't
tell
11 if it's crossed out or highlighted in this
photocopy,
12 but the other number is 100329328 -- excuse me,
13 1003293238 through 239.
14 MR. NUNLEY: What -- do you have another
15 Bates number on your copy? Did I miss something?
Do
16 you have two Bates numbers on yours?
17 MR. GORDON: Yeah. I think my -- for some
18 reason I'm looking at a different --
19 MR. NUNLEY: Okay.
20 MR. GORDON: -- version of it, but that's
21 why there are two different --
22 But the correct Bates number is apparently
23 1003293238 through 239.
24 BY MR. GORDON:
25 Q. And this is a document -- a memorandum dated
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

250
1 February 22nd, 1979. This is a memo from you to
Dr.
2 Seligman; correct?
3 A. Yes, sir.
4 Q. And in this document you are --
5 MR. SILBERT: Have you had a chance --

6 MR. NUNLEY: Could I ask that the witness
7 have a chance to look at it, please?
8 Q. Did you --
9 I'm sorry. Did you get a chance to look at it?
10 A. No, I didn't say anything. You asked me if
this
11 was from me to Dr. Seligman, and I said yes, sir.
12 Q. Why don't you take a second to look at it.
13 A. Yes, sir.
14 Q. Okay. In 1979 you were no longer
vice-president
15 for research and development; correct?
16 A. Correct.
17 Q. You had moved over into that --
18 A. I was in a staff position.
19 Q. Right. And Dr. Seligman was the
vice-president
20 for research and development?
21 A. As I recall it, yes.
22 Q. And this memo was expressing your opinion to
Dr.
23 Seligman that the research and development's
emphasis
24 on research on psycho-pharmacology of nicotine was
25 wrong; correct?
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

251
1 MR. NUNLEY: Objection as to the
2 characterization.
3 A. Well I wouldn't say it was wrong. I think --
4 I -- my -- the --
5 What I'm saying in the memorandum is that I
6 think that the emphasis on that was a too-narrow
7 approach to the overall problem of smoking
behavior.
8 Q. In other words, you thought that -- that
there
9 should be other areas of inquiry in addition.
10 A. Yes.
11 Q. Okay. And in this memo in 1979 you expressed
12 the opinion that you did not deny that many
smokers
13 maintained the habit for psycho-pharmacological
14 reasons. See that?
15 MR. NUNLEY: Objection -- excuse me.
16 A. That's what I said, yes.
17 MR. NUNLEY: Objection, characterization.
18 Q. And this is some 20 years after you wrote
that
19 memo to Robert Roper in which you said one of the
20 main reasons people smoke is to experience the
21 physiological effects of nicotine on the human
22 system; right?
23 A. I said that, yes.
24 Q. Exhibit 150.
25 A. Yes.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

252
1 Q. And in 1979, after more than 20 years of

working

2 for Philip Morris, you didn't consider yourself
naive

3 about cigarettes any more; did you?

4 A. Well --

5 MR. SILBERT: I -- I object to the
6 mischaracterization of the testimony.

7 A. Naivete is a relative thing. Maybe I was
less

8 naive than before.

9 Q. I'd like to go back to Exhibit 152.

10 MR. SILBERT: Are we looking at a
11 particular document?

12 MR. GORDON: Exhibit 152.

13 MR. SILBERT: Oh, excuse me.

14 THE WITNESS: This is it.

15 MR. SILBERT: Thank you.

16 MR. NUNLEY: Particular page, Corey?

17 MR. GORDON: First page.

18 Q. Dr. Wakeham, this -- do you recall this was
an

19 exhibit we talked a little bit about yesterday?
This

20 was your presentation to the R&D committee in
1961.

21 Do you recall that?

22 A. Yes.

23 Q. Okay. Now if you would flip to the page
bearing

24 the Bates stamp number 7442, top of the page it
says

25 "REDUCTION OF CARCINOGENS IN SMOKE."

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

253

1 A. Yes, sir.

2 Q. Okay. And "carcinogens" means things that
cause

3 cancer; right?

4 MR. NUNLEY: Objection as to form.

5 A. In a broad sense. But carcinogens --

6 Well yes, let's say in a broad sense carcinogens
7 are things which cause cancer.

8 Q. Well I'm curious. Is there a narrow sense
where

9 carcinogens don't cause cancer?

10 MR. SILBERT: Well counsel, he has a
11 definition in the document itself. I -- I -- I
12 object to the confusion between the document and

--
13 and general testimony. I think it should be
14 clarified. So my objection is lack of
clarification.

15 A. I believe that earlier in this document I
16 defined the carcinogen.

17 Q. Well all right. Why don't you find that for
us.

18 A. Here on your number 30.

19 Q. A carcinogen is "a substance which applied to
20 the tissue of -- of a test animal gives rise to
tumor

21 formation. In tests for carcinogens it is -- it

is

22 assumed that tumors ultimately lead to cancerous
23 growths and that a carcino -- carcinogen so
24 demonstrated in test animals is dangerous to man."

25 A. Yes.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

254

1 Q. Okay? That's -- that's your definition of
2 carcinogen.

3 A. Yes.

4 Q. Okay. Now let's go back.

5 MR. GORDON: And thank you, Mr. Silbert.

6 That's fine.

7 Q. Going back to page 442, "REDUCTION OF
8 CARCINOGENS IN SMOKE," that was a goal in 1961 of
the

9 research and development department of Philip
Morris;

10 correct?

11 MR. NUNLEY: Objection as to form.

12 A. Yes. And to paraphrase it, what we were
13 interested in was researching to find out if we
could

14 discover ways of reducing substances which, in
this

15 definition, had been stated to be carcinogens.

16 Q. Okay. And in 1961 you expressed the view
that

17 carcinogens are found in practically every class
of

18 compounds in smoke; right?

19 A. Wait a minute. "Class of compounds in
smoke?"

20 Forty -- are we 42? Is that where we're going?

21 Q. Yeah.

22 A. Yeah. Okay. Yes, uh-huh.

23 Q. Okay. And you concluded in 1961 that this
fact

24 prohibits complete solution of the problem by

25 eliminating one or two classes of compounds.

Right?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

255

1 A. All right. Well, let me remind you that this
2 goes back to 1961 and the whole field of
3 carcinogenesis and microbiology was in its infancy
4 then.

5 Q. In 1961 you were of the view that the fact
that

6 carcinogens -- carcinogens are found in
practically

7 every class of smoke of compounds -- strike that.

8 In 1961 you were of the view that the fact that

9 carcinogens were found in practically every class
of

10 compounds in smoke prohibited a complete solution
of

11 the problem by eliminating one or two classes of

12 compounds; correct?

13 A. Yes. And I'd like to explain that statement
if
14 I may.
15 In the first place, remember that the definition
16 of carcinogen in -- involved essentially an animal
17 test, so -- and -- and this was the test with test
18 animals, and the National Cancer Institute was at
19 that time embarking on a tremendous program to
20 identify various substances as to whether or not
they
21 were carcinogenic, and the list they were coming
up
22 with in animal tests was very long. It included,
as
23 I recall it, substances in practically every broad
24 classification of organic compounds known.
25 In subsequent years the National Cancer
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

256
1 Institute abandoned that program because they came
to
2 the conclusion that it was not giving them any
kind
3 of significant information as to what was a
4 carcinogen for man and what was not.
5 Let's say they came up with a list of a thousand
6 things which they thought were carcinogens by this
7 test. On the other hand, the World Health
8 Organization came up with a list of only something
9 like 10 or 12 or 15 substances which they thought
10 were carcinogenic in man. That's the kind of
11 discrepancy that existed in the whole area of, you
12 know, defining what is a carcinogen.
13 Now in 1961, looking at a list of all those
14 substances which the National Cancer Institute
felt
15 were carcinogenic, and knowing what we knew about
the
16 composition of smoke, I made the statement that in
17 all the various classes of organic compounds which
18 are present in smoke, you could find in those
classes
19 one or two things which the National Cancer
Institute
20 in its program had thought were carcinogens. And
21 that was the basis for this statement which I have
22 made here.
23 Q. Again, no disrespect, but I move to strike as
24 non-responsive.
25 In 1962 you believed that the chemical
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

257
1 constituents of smoke were a real problem;
correct?
2 MR. SILBERT: Objection, vagueness.
3 A. What is meant by "a problem?"
4 Q. Well let's go to a document.
5 (Plaintiffs' Exhibit 165 was marked
6 for identification.)

7 BY MR. GORDON:
8 Q. Showing you Exhibit -- Exhibit 165, bearing
9 Bates stamp 1001882139, a memo dated January 12,
10 1962.
11 (Discussion off the stenographic record.)
12 Q. It's a memo from you to Hugh Cullman;
correct?
13 A. Yes, sir.
14 Q. And in this memo you were questioning the
15 assertion that Dual Tareyton smokers had a higher
16 incidence of chronic coughing; right?
17 A. Yes.
18 Q. Tareyton was a competitor's cigarette;
correct?
19 A. Yes.
20 Q. And you were noting to Mr. Cullman that all
21 cigarette filters can be shown to transmit
particles
22 to the smoker; correct?
23 A. Yes.
24 Q. So you didn't think that the transmission of
25 particles to the smoker from cigarette filters was

a
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

258
1 particularly important issue in 1962; right?
2 MR. NUNLEY: Objection as to the
3 characterization.
4 MR. SILBERT: Objection, vagueness.
5 A. Let's define "particles" here. I think this
6 refers to particles different from the particulate
7 matter that arises from the burning of tobacco in
the
8 cigarette mainstream. I think this refers to
9 particles of, let's say, matter which -- well I
use
10 the term "sand, lint, clay and other impurities."
11 And I don't recall in detail the circumstances of
12 this, but such tiny particles could be in the
smoke
13 stream.
14 Q. And you didn't consider that a major problem
in
15 1962.
16 A. Yes, sir, I did not consider that a major
17 problem.
18 Q. Okay. But you did consider the chemical
19 constituents of smoke a real problem.
20 A. Yes. I --
21 Well a problem in terms of defining the
22 composition of smoke from the point of view of
23 chemical constituents. And I'm referring there to
24 the -- the particulate matter which results from
the
25 burning of the tobacco.

STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

259
1 Q. And what you told Mr. Cullman in 1962, after
2 expressing the view that the particles passing

3 through the filter were not a problem, was, quote,
4 "Let's worry about the chemical constituents of
5 smoke. There's a real problem."
6 A. Yes, sir.
7 Q. Right?
8 A. And what I meant by that was that there was a

--

9 a huge problem to define the chemical composition
of
10 the organic particulate matter which came through
in
11 the smoke stream.

12 Q. Who was Peter Waltz?

13 A. Peter Waltz was at Fabriques Tabac Reunies in
14 Neuchatel, Switzerland.

15 Q. Do you recall what his position was in 1963?

16 A. No.

17 Q. Well I'll show you a document, it's got a --
18 apparently a title in French. Maybe you can help
19 figure it out.

20 MR. GORDON: Can I have Exhibit 92,
21 please.

22 MR. NUNLEY: Do you have any additional
23 copies of that, Corey?

24 MR. GORDON: No, I'm sorry, I didn't bring
25 copies of exhibit -- of existing exhibits.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

260

1 A. Are you going to interrogate me about the
whole
2 article, or specifically refer to some page or
3 other?

4 MR. SILBERT: Read it.

5 Q. The questions I'm going to be asking you are
6 about pretty much the whole thing, yeah.

7 MR. SILBERT: Just read it.

8 A. Well then I better read it.

9 Q. Okay.

10 A. All right.

11 Q. Okay. First of all, in the upper left-hand
12 corner on the top page it says something in French
13 about Peter Waltz.

14 A. Well he's a scientific --

15 He's head of the research function at Neuchatel.

16 Q. Of FTR?

17 A. FTR, yes.

18 Q. And that was Philip Morris's European
19 subsidiary.

20 A. Yes. After -- I -- I don't --

21 I'm not sure when we acquired FTR. What was --
22 what was the date on this?

23 Q. 1963.

24 A. '63.

25 We acquired FTR after I became familiar with

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

261

1 it. FTR were under contract to make Marlboros for
2 some years before we acquired the company.

3 Q. Before you acquired it --

4 MR. NUNLEY: Mr. Gordon, since the jury
5 sees me standing over Dr. Wakeham's shoulder, I
6 should let the jury know why I'm standing here.
We
7 only have one copy of the exhibit, and I am going
to
8 stand over his shoulder and look at it while you
ask
9 questions.

10 THE WITNESS: Oh, I'm sorry.

11 MR. NUNLEY: No, that's all right.

12 Q. Was it customary, before Philip Morris
acquired

13 FTR, for FTR's scientific department to share
14 scientific findings with Philip Morris?

15 MR. NUNLEY: Objection, speculation.

16 A. I don't know. I don't know that it was
17 customary.

18 Q. Did it ever happen, to your recollection?

19 A. No. It's a long time ago. I don't recall.

20 Q. Okay. Direct your attention to the second
page

21 of this exhibit, the very bottom.

22 A. Uh-huh.

23 Q. Direct your attention to the paragraph that
24 states, quote, "Nitrosamines are the most potent
25 carcinogens known. By oral, subcutaneous or
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

262

1 intravenous application, tumors are obtained at
2 various spots, usually far from the site of
3 application." Do you see that?

4 A. Yes.

5 Q. Was that news to you in 1963?

6 MR. NUNLEY: Objection as to form.

7 A. I don't know whether it was news or not. I
8 don't know what this -- I don't know --

9 I can't classify or categorize the state of my
10 knowledge in 1963 with regard to this particular
area
11 of science.

12 Q. So as you sit here today -- and I concede
that
13 it's 34 years later -- you don't remember in 19 --
14 when you -- when you received this letter 34 years
15 ago whether the statement that nitrosamines are
the
16 most potent carcinogens known was a surprise to
you
17 or something that was something you had already
18 heard.

19 A. Well you're assuming this statement is a
fact.

20 What Mr. Waltz is -- Dr. Waltz is doing is he's
21 reporting on a conference which took place --
where?

22 In Hamburg or someplace? Yeah. He's reporting on
--
23 on a conference which took place there, and he is
24 transmitting the information which he's distilled
out

25 of the meeting.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

263

1 Q. Most developments in science are presented at
2 some form of scientific conferences; aren't they?

3 A. Well many are, yes.

4 Q. Okay. Now turn your attention to page three
of

5 this document under paragraph two, "Dosage." See
the

6 line, "The dosage needed to induce cancer in test
7 animals is for most nitrosamines exceedingly low?"

8 A. Yes.

9 Q. And again, you can't remember whether that
was

10 something you had heard for the first time.

11 A. No, I can't.

12 Q. Okay. And now if you direct your attention
to

13 number five, under number eight, "Inhalation
14 Experiments" --

15 A. Number --

16 MR. SILBERT: What page are you on?

17 A. You -- you -- you --

18 Q. Page five.

19 A. Page five, I'm sorry.

20 Q. Paragraph eight, "Inhalation Experiments."

21 Direct your attention to the line that says,
quote,

22 "Hamsters on inhalation with tobacco smoke after
23 eight months show -- show lung lesions. There is
24 reasonable belief that in several more months lung
25 carcinomas will be obtained." See that?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

264

1 A. Yes.

2 Q. Now in 1963, was that the first time that you
3 had heard that hamsters inhaling cigarette smoke

--
4 tobacco smoke had shown lung lesions?

5 A. I have no idea.

6 Q. Okay. And number -- paragraph nine on this
same

7 page, "The presence of Nitrosamines in tobacco or
8 smoke is not established, nor disproved, for lack

of
9 a suitable analytical method." See that?

10 A. Yes.

11 Q. Does that comport with your recollection that
in

12 1963 you weren't sure whether nitrosamines were in
13 tobacco or not?

14 MR. NUNLEY: Well objection. Are you

15 saying that -- well I don't --

16 Objection to the form of the question. I think
17 it's vague.

18 A. You're asking me about the -- the state of my
19 knowledge about the chemistry of tobacco smoke in
20 1963, and I really have no recollection of, you

know,

21 what my state of awareness was or was not.

22 Q. At some point you came -- became aware of the
23 fact that there are nitrosamines in tobacco smoke;
24 correct?

25 MR. NUNLEY: Objection, vague.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

265

1 A. I think I did, yeah. Some -- sometime I
became,

2 let's say it this way, informed. I was informed
by

3 the organic people that there were nitros --
4 nitrosamines in smoke.

5 Q. And I direct your attention to page six,
under

6 "Conclusion." Direct your attention to the line
7 that says, "As a whole one can say that the
8 Nitrosamines are very potent carcinogens, potent
9 mutagenes, that they have a very good

dose-response

10 relationship, an astonishing relation between
11 structure and organotropic reactions, that their
12 effect on the chemical structure of the attacked
13 organism is better known than for most
carcinogens."

14 Do you see that?

15 A. Yes.

16 Q. And again, you can't recall whether that was

--

17 A. No.

18 Q. -- news to you or not; right?

19 A. No.

20 MR. SILBERT: Mr. Gordon, at some

21 appropriate time, if we are going to recess for
lunch

22 at noon, we'd like to take the morning break.

23 MR. GORDON: Sure.

24 (Plaintiffs' Exhibit 166 was
25 marked for identification.)

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

266

1 BY MR. GORDON:

2 Q. Showing you Exhibit 166, bearing Bates stamp
3 number 2022242310 through 2312, memorandum dated
Oct

4 twenty -- October 24, 1963 from --

5 This is a memo from you to Mr. Cullman;

6 correct? Let me amend that. That's from you to
Mr.

7 Hugh Cullman; correct?

8 A. Yes, sir.

9 Q. I'm only going to ask you questions about a
10 couple of topics. If you want to read the whole
11 memo, you can, but the first one I'm going to ask
you

12 about is on page two under the paragraph

13 "Nitrosamines."

14 MR. SILBERT: Why don't you read it.

15 MR. NUNLEY: Corey, while Dr. Wakeham is
16 reviewing that, do you have any view about timing?
17 Do you think you'll need -- we will break, go to
18 lunch, and do you think you will run close to

2:00,

19 or do you think -- I mean not to hold you to it,
just

20 for planning purposes.

21 MR. GORDON: I'm --

22 As I told another lawyer, I'm -- I'm going to do
23 my best to get done as quickly as possible, and I

--

24 my hope is to even finish and have some time for
you

25 to do your cross. But it's impossible to predict.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

267

1 MR. SANDMAN: Do you have a sense as to how
2 much you need for cross? I mean Arch is going to
3 have to come back; I know that. But as far as --
4 I'll do what I can do.

5 MR. NUNLEY: Let me think about it at the
6 break, and I'll tell you when we come back.

7 A. All right.

8 Q. Okay. On page two under "Nitrosamines," you
9 indicate to Mr. Hugh Cullman that you have had
those

10 substances under investigation since early that
year,

11 early 1963; correct?

12 A. That's what I said, yes.

13 Q. And you tell him that you have found
indications

14 of their presence, particularly the higher members
15 of -- members of the series; right?

16 A. Yes.

17 Q. In other words, you found indications of the
18 presence of nitrosamines in cigarette smoke;
right?

19 A. Yes.

20 Q. And if I direct your attention to page three,
21 you discuss bronchitis and emphysema; correct?

22 A. Yes.

23 Q. And you express the opinion to Mr. Hugh
Cullman

24 that bronchitis and emphysema, quote, "are serious
25 diseases involving millions of people. Emphysema
is

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

268

1 often fatal directly or through other respiratory
2 complications." See that?

3 A. Yes.

4 Q. That was your opinion back in 1963?

5 A. Well that was based on my limited knowledge
of

6 the disease of emphysema.

7 Q. Okay. You no longer hold those opinions?

8 A. No. Emphysema is still a fairly widespread

9 disease.
10 Q. Is it a serious disease?
11 A. Can lead to death, as I understand it.
12 Q. Are chronic bronchitis and emphysema still,
in
13 your view, serious diseases involving millions of
14 people?
15 MR. NUNLEY: Objection, relevance.
16 A. Well I'm not a medical doctor. I --
17 My opinion would be based on, you know, common
18 knowledge. Emphysema is a disease. I -- you and
I
19 have both seen patients with emphysema. We've
20 probably known people who have died from
emphysema.
21 I don't think there's anything particularly new in
22 this statement. I'm just relating it to the
overall
23 picture.
24 MR. GORDON: Let's take our break now.
25 (Recess taken.)
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

269
1 (Plaintiffs' Exhibit 167 was marked
2 for identification.)
3 BY MR. GORDON:
4 Q. Dr. Wakeham, let me show you Exhibit 167,
5 bearing Bates stamp number 1001810121, memorandum
6 dated February 15, 1966.
7 This is a memo from Peter Luchsinger to you;
8 correct?
9 A. It appears to be so, yes.
10 Q. Am I pronouncing his name correctly?
11 A. Yes.
12 Q. Who was Dr. Luchsinger?
13 MR. SILBERT: Can he have a moment to read
14 the memo?
15 A. Dr. Luchsinger was a consultant to the
research
16 department.
17 Q. And one of his areas of consulting was to
18 provide you with information about research
conducted
19 by outside researchers; is that correct?
20 A. Well in a broad sense. His area, as I recall
21 it, was in the field of respiratory problems.
22 Q. Okay. And --
23 A. He's a medical doctor, by the way.
24 MR. NUNLEY: Sorry. Have you had a chance
25 to review the document? Are you going to move to
the
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

270
1 document, Corey?
2 MR. GORDON: Yeah.
3 (Mr. Gordon bumps the video camera.)
4 MR. NUNLEY: Watch the camera.
5 A. Yes. What --
6 Q. Okay. In this particular document, Exhibit

167,
7 Dr. Luchsinger is reporting to you on a meeting he
8 had with Professor Dontenwill; correct?
9 A. Yes.
10 Q. And he summarizes some experiments that Dr.
11 Dontenwill had reported to him; correct?
12 A. Apparently, yes.
13 Q. And in one of these experiments, Dr.

Dontenwill

14 had administered tobacco condensate by spray gun
into
15 the trachea of hamsters; correct?

16 MR. NUNLEY: Objection. As asked, it calls
17 for hearsay.

18 A. I have no direct knowledge of this
experimental

19 program of Professor Dontenwill.

20 Q. This is what was reported to you by Dr.
21 Luchsinger in 1966; correct?

22 A. Yes.

23 Q. And that's what -- one of the things Dr.
24 Luchsinger was being paid to do, was report these
25 sorts of things to you; right?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

271

1 A. Yes.

2 Q. Okay. And he reported in 1966 that Dr.
3 Dontenwill had administered tobacco condensate by
4 spray gun into the trachea of hamsters; right?

5 A. Yes, sir. He's describing an experiment
which

6 apparently Professor Dontenwill performed.

7 Q. And Dr. Dontenwill observed bronchial
8 carcinomas, according to Dr. Luchsinger; correct?

9 A. Well you're divulging the information in the
10 memorandum or letter.

11 Q. Right. And just so the jury understands,
12 bronchial carcinomas means lung cancer; right?

13 MR. NUNLEY: Objection as to form.

14 A. Well I suppose that would be the definition
of

15 lung --

16 (Plaintiffs' Exhibit 168 was marked
17 for identification.)

18 BY MR. GORDON:

19 Q. Showing you Exhibit 168, bearing Bates stamp
20 number 1001810221 through 224, memorandum dated
21 August 29, 1966. This is a memo from Dr.

Luchsinger

22 to you and several other people; correct?

23 A. Yes.

24 Q. Are the other people all Philip Morris
25 employees?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

272

1 MR. NUNLEY: Corey, you mean at --

2 A. They are, with the exception --

3 I don't recognize Morton Comer as being a Philip
4 Morris person. He may have been.

5 MR. NUNLEY: You mean, Corey, as of the
6 date of the memo; correct?
7 MR. GORDON: Right.
8 Q. Why don't you take a moment to review the
memo.
9 Ready?
10 A. Yes.
11 Q. Okay. In this memo Dr. Luchsinger is
12 summarizing a meeting that he and Dr. Hausermann
had
13 with scientists from the Imperial Cancer Research
14 Foundation in London; correct?
15 A. That's what the memorandum says, yes.
16 Q. And it summarizes certain tests conducted by
a
17 Dr. Harris and a Dr. Negroni; correct?
18 A. That's reported in the memorandum.
19 Q. They had been doing inhalation tests with
mice;
20 correct?
21 A. Well I have no direct knowledge of the
22 information that's in here. This is something of
23 which I have no recollection whatsoever.
24 Q. Okay. But according to the memo, Drs. Harris
25 and Negroni had done inhalation tests with mice;
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

273
1 correct?
2 A. That's what the memo purports to describe,
yes.
3 Q. Okay. And this memo sent to you in 1966
4 apprises you that these tests by Dr. Harris and
5 Negroni demonstrated that six of the 200 smoking
mice
6 developed lung tumors by histological techniques;
7 correct?
8 MR. NUNLEY: Objection as to the --
9 A. You're describing the memorandum.
10 MR. NUNLEY: -- form of the question.
11 Q. Right.
12 A. Yes.
13 Q. That's what you were told in 1966; right?
14 A. Well I was -- I --
15 Wait a minute. I received a copy of the memo.
16 Q. And you read it; didn't you?
17 A. I have no recollection of reading it. I -- I
18 may have read it.
19 Q. Okay. Are those your initials in the upper
20 right-hand corner?
21 A. Yes. But that doesn't mean I read it, it
means
22 I received it.
23 Q. Was --
24 Were you in the habit of not reading memos that
25 came to you?
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

274
1 A. No, I wasn't in the habit one way or the
other.

2 I wrote -- I read things which were of interest to
3 me, and some things I passed on to other people in
4 the research department.
5 Q. So this may have been -- may have been
something
6 that you didn't even read; is that what you're
7 saying?
8 A. It's possible.
9 Q. As you sit here today, do you know if in 1966
10 inhalation tests in mice demonstrating lung cancer
11 from cigarette smoke, was that something that
would
12 or would not have been interest -- would have been
of
13 interest to you?
14 MR. NUNLEY: Objection as to form.
15 A. I don't recall.
16 Q. Okay. Direct your attention to page two, the
17 very bottom -- towards the very bottom of the
page,
18 the last full paragraph there where it says,
19 "Incidentally, the tumors observed in Dr. Harris'
20 tests are alveolar cell carcinomas and therefore,
21 quite different from the bronchogenic carcinomas
22 observed in the human smokers." Is that correct?
Do
23 you see that line?
24 A. I see that line.
25 Q. And alveolar carcinomas, that's a form of
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

275
1 cancer; isn't it?
2 MR. NUNLEY: Objection, foundation.
3 A. I wouldn't know.
4 Q. You don't know if alveolar cell carcinomas
are
5 cancer or not.
6 A. That's a medical term.
7 Q. And you don't feel yourself --
8 A. I'm not -- I'm not competent. I don't know
9 whether -- it -- it --
10 The term "alveolar cell carcinoma" would imply
11 that it's a cancer.
12 Q. And do you recall whether -- in 1966 whether
you
13 read this memo indicating that these inhalation
tests
14 demonstrated cancer -- lung cancer in mice from
15 smoking cigarettes?
16 A. I have no recollection --
17 MR. NUNLEY: Objection, asked and answered.
18 A. -- of reading the memo.
19 (Plaintiffs' Exhibit 169 was marked
20 for identification.)
21 BY MR. GORDON:
22 Q. Showing you Exhibit 169, a document bearing
23 Bates stamp number 1001609645 through 670, a
document
24 that does not have a title, but there appears to
be a
25 handwritten date in the upper right-hand corner of

276

1 4-26-68 or 69. It's difficult to read.

2 Those are your handwritten initials in the upper
3 left-hand corner; correct?

4 A. Yes, sir, my initial appears to be there.

5 Q. Can you tell if that's your handwriting for
that

6 date?

7 A. I would --

8 I don't believe that's my handwriting.

9 Q. Okay. It's a lengthy document and I'm only
10 going -- and it covers a number of subjects, but
I'm

11 only going to be asking you about the gas-vapor
phase

12 inhalation studies that are described on pages 16
13 through 20, I believe.

14 Can I ask you questions about the gas-vapor
15 phase inhalation studies?

16 A. Well yes, you may ask me questions.

17 MR. SILBERT: Have you read it?

18 THE WITNESS: This is on page 20?

19 MR. GORDON: Sixteen.

20 THE WITNESS: Oh, I'm sorry.

21 MR. GORDON: Begins on page 16.

22 A. What is your question?

23 Q. This document is discussing -- this portion
of

24 the document is discussing inhalation tests
conducted

25 under the auspices of Council for Tobacco
Research;

277

1 correct?

2 A. Well it's a report by Dr. Hockett of various
3 things which have been done by The Council for
4 Tobacco Research and others.

5 Q. Okay. And the early tests, the early smoke
6 inhalation tests done by CTR were done with
7 relatively unsophisticated equipment.

8 A. I'm sorry, I'm not familiar with -- in detail
9 with regard to this particular report or the work
10 that was done by CTR in -- whatever date this was.
11 1969? I have no recollection of --

12 Q. You have no independent recollection of there
13 being an improved inhalation team developed by one
of

14 CTR's grantees.

15 MR. FALKENSTEIN: Objection as to form.

16 MR. NUNLEY: Corey, you said -- excuse me.
17 Corey, you said "improved inhalation team," you
mean

18 "test?"

19 MR. GORDON: "Machine."

20 MR. NUNLEY: Oh, "machine." Excuse me.

21 A. I'm not familiar enough with this subject
22 material to even comment on it.

23 Q. Okay. Let me direct your attention in
24 particular to page 19.

25 A. Nineteen.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

278

1 Q. And I want to direct your in-particular
2 attention to the paragraph that says, quote, "The
3 whole-smoke and gas-vapor phase experiments
mentioned

4 as having been carried out with a 'partially
5 improved' mechanical device, turned up still
another

6 result. A few of the exposed animals were found
to

7 have adenocarcinomas in the lung or hepatomas in
the
8 liver."

9 MR. NUNLEY: Corey, let me --

10 Q. See that?

11 MR. NUNLEY: Excuse me. You're directing
12 him now to an additional section which I don't
think

13 he's reviewed. I think you told me you were going
to

14 do -- or told him gas phase, and that --

15 MR. GORDON: Sixteen through 20 is what I
16 said, Chip.

17 MR. NUNLEY: Well I think you said you
18 wanted to ask him about the gas-phase portion of
it.

19 If he read it, that's fine, but I stopped when I
20 read it at the portion you're starting on now.

21 A. Well are you asking --

22 MR. SILBERT: Wait for his question.

23 Q. Do you see that line?

24 A. Yeah. What is your question, please?

25 Q. Do you remember in the '68, '69 frame reading
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

279

1 this memo indicating that, using a partially
improved

2 inhalation machine, CTR demonstrated
adenocarcinomas

3 in the lungs of animals?

4 A. I don't --

5 I don't remember this memorandum at all. Or
6 this document.

7 Q. Would it --

8 Would it have been significant to you in 1969 if
9 inhalation tests had demonstrated adenocarcinomas
in

10 the lung?

11 MR. WEIL: Objection.

12 A. You're asking for an opinion?

13 Would it have been significant? Might be. I --
14 I had a lot things on my plate besides the
detailed

15 descriptions of experiments of this type.

16 Q. Who were the Leuchtenbergers? I may be

17 pronouncing that wrong.
18 A. They were a Swiss couple in Switzerland -- I
19 mean in -- I don't remember the town.
20 Q. Who was L. Weissbecker?
21 A. L. Weissbecker was on the staff of the
Research
22 Center.
23 Q. Of Philip Morris?
24 A. Yes.
25 (Plaintiffs' Exhibit 170 was marked
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

280
1 for identification.)
2 BY MR. GORDON:
3 Q. Showing you Exhibit 170, bearing Bates number
4 1001881485 through 489, a document entitled
5 "EXPERIMENTALLY INDUCED BRONCHITIS," and I direct
6 your attention to your handwritten name in the
upper
7 right-hand corner and your received stamp on the
back
8 of page.
9 MR. NUNLEY: Well I -- I object to your
10 conclusion that's his handwriting. I don't know
11 whether it is or not.
12 MR. GORDON: I didn't say his handwriting.
13 MR. NUNLEY: Well it just says "your
14 handwritten name." I agree, that's ambiguous. I
15 thought you were referring to that he had written
it.
16 A. What is your question about this?
17 Q. Have you had a chance to review it?
18 MR. SILBERT: The whole --
19 A. Are you going to ask me to comment on the --
20 this material? This is a technical discussion of
the
21 experimental work apparently done by the
22 Leuchtenbergers.
23 Q. Okay. And in this summary --
24 Is Weissbecker a doctor or a mister?
25 A. He's a mister.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

281
1 Q. Okay. And in this summary Mr. Weissbecker is
2 summarizing certain inhalation tests done by the
3 Leuchtenbergers; correct?
4 MR. SILBERT: Have you had a chance to read
5 it?
6 A. Well I haven't read it to that detail. It's
7 a -- it's apparently a copy of the document which
he
8 prepared which he passed -- which -- to which I
9 was -- a copy of which was given to me for
10 information.
11 I can read it --
12 Q. Why don't you read it.
13 A. -- if you would like me to read it.
14 Q. I would like you to read it.
15 A. What is your question, please?

16 Q. This memo summarizes Leuchtenbergers'
inhalation

17 tests with mice; correct?

18 MR. NUNLEY: Objection to the
19 characterization, speculation and hearsay.

20 MR. FALKENSTEIN: Objection as to form.

21 A. I don't know whether it accurately summarizes
or

22 not. It's a report by Lou Weissbecker.

23 Q. I'm not asking whether it's an accurate
24 summary. I'm asking you whether it is in fact a
25 summary.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

282

1 A. It appears to be a summary.

2 Q. Okay. And in this summary that was sent to
you,

3 Mr. Weissbecker from your research and development
4 staff reports that the Leuchtenbergers'

experiments

5 showed that 50 percent of the mice showed no
changes,

6 25 showed mild bronchitis, 20 percent showed
severe

7 bronchitis; right?

8 MR. NUNLEY: Objection, speculation,
9 foundation.

10 A. You're reading from the first line of the
11 memorandum.

12 Q. Page two.

13 A. Or page two. Yes.

14 Q. Okay. And the --

15 Mr. Weissbecker reports that the Leuchtenbergers
16 mentioned observing emphysema; right?

17 MR. NUNLEY: Same objection.

18 A. That's what it says.

19 Q. And in the conclusion Mr. Weissbecker states,
20 quote, "The interrelationship of cigarette smoking
21 and health can only be ascertained by

experimentation

22 in a biological system." See that?

23 A. That --

24 I see that, yes.

25 Q. You agree with that; don't you?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

283

1 MR. NUNLEY: Objection as to form.

2 A. I don't know that I would disagree with it.

3 Q. And the next line in the conclusion states,
4 quote, "The effects that cigarette smoke has on

5 animal tissue must be examined in its relation to
the

6 human situation." You agree with that; don't you?

7 MR. NUNLEY: Objection as to form.

8 A. Yes.

9 Q. And Mr. Weissbecker also states, quote, "The
10 close correlation between cytological observations

in

11 mice and humans can not be ignored." Do you agree

12 with that?
13 A. What difference --
14 MR. NUNLEY: What timeframe?
15 A. -- does it make whether I agree with it or
don't
16 agree with it?
17 This is Mr. Weissbecker's conclusion. Asking me
18 to agree to this is like asking me to agree to
19 motherhood.
20 Q. Back in 1969 when you were vice-president for
21 research and development at Philip Morris, did you
22 agree with that statement, or not?
23 A. I don't recall --
24 Q. Okay.
25 A. -- my reaction to this statement.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

284
1 Q. And the next statement says, quote, "Evidence
2 that cigarette smoke causes a breakdown in the
3 defense mechanism of the pulmona -- pulmonary
system
4 is clear and this procedure should allow us to
5 evaluate the effect, if any, of altering cigarette
6 smoke composition in a relatively short period of
7 time."
8 Again in 1969 when you were vice-president of
9 research and development for Philip Morris, did
you
10 agree or disagree with that statement?
11 A. I don't recall.
12 MR. NUNLEY: Objection as to form.
13 MR. SILBERT: Objection. This document is
14 dated 1965, I believe, counsel.
15 MR. GORDON: I apologize. You're
16 absolutely right. And I'd like to re-ask the
17 question based on 1965.
18 A. I don't recall my response to this.
19 Q. Okay. Do you recall a period of time when a
Dr.
20 Auerbach reported finding lung cancers in dogs
that
21 he had exposed to cigarette smoke?
22 MR. NUNLEY: Objection as to form and
23 vagueness.
24 A. I recall reading or hearing about Dr.
Auerbach's
25 experiments. As I recall it, he did not identify
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

285
1 lung cancer.
2 Q. Do you recall that at least initially Dr.
3 Auerbach claimed that he had found lung cancer?
4 A. My recollection is that he found what would
be
5 described as precancerous lesions.
6 Q. And do you recall the cigarette industry
being
7 critical of Dr. Auerbach's experiments?
8 MR. NUNLEY: Objection as to form, and

9 vagueness.
10 A. What do you mean by "the industry" as -- as a
--
11 Q. Well let's take Philip Morris to start with.
12 Did Philip Morris have any criticisms of Dr.
13 Auerbach's study?
14 MR. NUNLEY: Objection as to form.
15 A. I don't believe there were criticisms in
16 substance. I think there were criticisms of the
way
17 that the information that was released by the
18 American Cancer Society in some kind of a press
19 conference.
20 Q. You don't recall Philip Morris having any
21 criticisms of the substantive findings of Dr.
22 Auerbach though; is that correct?
23 A. No.
24 (Plaintiffs' Exhibit 171 was marked
25 for identification.)
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

286
1 BY MR. GORDON:
2 Q. Showing you Exhibit 171 bearing Bates stamp
3 number 1000837391 through 392, memorandum dated
4 February 25, 1970. This is a memorandum from Dr.
Ray
5 Fagan to you; correct?
6 MR. SILBERT: If he could have a moment to
7 read it.
8 A. What is the question?
9 Q. This is a memo from Dr. Ray Fagan to you;
10 correct?
11 A. Yes.
12 Q. It's a summary of his visit to Dr. Auerbach's
13 laboratories; correct?
14 MR. NUNLEY: Objection, speaks for itself.
15 A. It would appear that he made a visit, yes.
He's
16 reporting a visit.
17 Q. And Dr. Fagan is summarizing his own analysis
of
18 Dr. Auerbach's findings; correct?
19 MR. NUNLEY: Objection, speculation.
20 A. That would appear to be the subject of the
21 memorandum, yes.
22 Q. And Dr. Fagan raises some questions as to
23 whether or not Dr. Auerbach's experiments
24 demonstrated true carcinoma; correct?
25 MR. WEIL: Objection.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

287
1 (Discussion off the stenographic record.)
2 MR. SILBERT: I object based on
3 speculation.
4 A. Are you asking me to confirm that I have read
5 this memorandum, or confirm the contents of the
6 memorandum? I don't understand what you're -- why
7 you're asking me the questions this way. Do you
want

8 me to read the memorandum and confirm that what
9 you've read is correct?
10 Q. I want you to testify for the benefit of the
11 jury as to whether it is your understanding that
this
12 memo -- that one aspect of this memo is that Dr.
13 Fagan in 1970, when he was writing this to you,
was
14 expressing some questions as to whether or not Dr.
15 Auerbach's experiments had demonstrated cancer.
16 MR. SILBERT: Objection, competency.
17 MR. NUNLEY: And also I object, Corey. I
18 think in most of your questions as to documents,
you
19 fail to lay any foundation for whether the witness
20 has seen them, and you're doing it here, too.
21 (Discussion off the stenographic record.)
22 A. Well, let me say that I do not recall the
memo,
23 and I was surprised on seeing the memorandum that
24 apparently Dr. Fagan had made a visit to Dr.
25 Auerbach. I did not recall that he had done that.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

288

1 So the memorandum purports now to summarize his
2 observations, having visited Dr. Auerbach.
3 Q. And one of those observations is he is not
4 certain that cancer has been produced; correct?
5 A. That's what he says here.
6 Q. But on the second page under paragraph eight,
7 Dr. Fagan says, quote, "...even if the cancer-
8 production is invalidated the obvious emphysema
9 produced cannot be denied." Do you see that?
10 A. Well is he contradicting himself?
11 Q. I'm just asking if you see that sentence,
sir.
12 A. I see the sentence, yes.
13 Q. Okay. And you don't recall as you sit here
14 today in 1970 reviewing a memo from Dr. Ray Fagan,
a
15 doctor of veterinary medicine, who visited Dr.
16 Auerbach's laboratories and concluded that obvious
17 emphysema was produced by cigarette-smoking
beagles.
18 MR. NUNLEY: Objection, the question's
19 argumentative.
20 MR. SILBERT: Yeah.
21 A. I do not recall the memorandum.
22 Q. Would it have been significant to you in 1970
23 as -- well strike that.
24 Would it have been significant for you in 1970
25 that inhalation tests in dogs demonstrated obvious
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

289

1 emphysema?
2 MR. WEIL: Objection.
3 A. It might have been.
4 You're saying this is obvious?
5 Q. I'm asking you whether in 1970, that you

would

6 have found such a statement significant.

7 MR. WEIL: Objection.

8 MR. SILBERT: Objection, vague and

9 ambiguous as to what "such a statement" is.

10 A. By the term "significance," do you mean would
I

11 have made note of it or been given some kind of a
12 different opinion or educated with regard to it?

Is

13 that -- is that significant?

14 And please recall that I had a lot of things on

15 my plate besides these biological programs that

were

16 going on with respect to smoking and health. We

17 didn't devote the entire effort of the research

18 department to this particular type of work. We

19 had --

20 We were concerned with the problems in

21 production, in tobacco reconstitution, in all

kinds

22 of other things besides this particular type of --

of

23 endeavor, and so I didn't necessarily spend all my

24 time reading or looking at these memoranda. I

think

25 it's appropriate that Dr. Fagan went up and

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

290

1 interviewed and discussed this with Dr. Auerbach.

I

2 think it's very appropriate because of his

background

3 and experience in the field.

4 I had before this taken the position that I

5 thought inhalation experiments would be more

6 significant because they would be closer to the

human

7 experience than skin-painting tests, so I paid

8 probably more attention to this line of work than

I

9 did to the skin-painting results which were being

10 obtained in various bioassay studies.

11 Q. But as you --

12 THE REPORTER: We have to change tape. Off

13 the record, please.

14 (Discussion off the record.)

15 BY MR. GORDON:

16 Q. Your counsel just spoke to you while we were

17 changing tape; correct?

18 A. Yes.

19 Q. What did he tell you?

20 MR. SILBERT: Objection. Instruct not to

21 answer. Privilege.

22 Q. So as you sit here today in 1997, do you

recall

23 attaching any significance to these series of

memos

24 that we've just gone through demonstrating in

25 inhalation experiments that cigarette smoke caused

STIREWALT & ASSOCIATES

291

1 lung cancer and emphysema in the test animals?

2 MR. NUNLEY: Objection as to form.

3 A. Well I wouldn't say that I ignored them. If

I

4 received -- when I --

5 If I received and when I received this

6 memorandum, which I assume I did, I would have

7 certainly noted that inhalation was an area of

8 activity which had been carried out and which was

in

9 what I considered a better approach to the

question

10 of how to determine the effects of cigarettes; in

11 other words, as a bioassay of cigarette and its

12 relation to smoking and health.

13 Q. Do you think Philip Morris had an obligation

to

14 stop marketing a product if it knew that it caused

15 emphysema and lung cancer in its users?

16 MR. SILBERT: Objection, competency.

17 MR. NUNLEY: Objection, relevance.

18 A. That's a moral question; isn't it? You --

19 I don't understand the -- the question.

20 Q. In your opinion, did Philip Morris have an

21 obligation to stop marketing a product if it knew

22 that it caused emphysema and lung cancer in its

23 users?

24 MR. WEIL: Objection.

25 MR. SILBERT: Objection, incompetent.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

292

1 Incompetent evidence.

2 A. No, I don't think so. In the first place, I

3 think all experiments which were done were done

with

4 animals, and the question of whether or not this

5 carried over into humans was still a point at

issue.

6 MR. GORDON: Thank you. I have nothing

7 further.

8 THE REPORTER: Let's go off the record,

9 please.

10 (Discussion off the record.)

11 MR. GORDON: What time did we go off the

12 record?

13 THE REPORTER: I don't know.

14 MR. GORDON: It's not on here?

15 When we went off the record, you folks went out

16 in the hall and -- and had your discussion, came

back

17 in. Mr. Nunley indicates that he wants to take a

18 lunch break early now and then do his

19 cross-examination after lunch. Plaintiffs object

to

20 this. Mr. Nunley has represented he doesn't think

it

21 will take longer than about 20 minutes to do his

22 examination, which is more than enough time before

23 the agreed-upon lunch break of noon.
24 It is the plaintiffs' position that -- that
25 defendant should go -- Defendant Philip Morris
should
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

293
1 go ahead and conduct its examination right now.
2 Philip Morris is refusing to do that and insisting
on
3 taking a break now.
4 Again, we object to this and we would ask
5 stipulation from all the parties that there will
be
6 no discussion with Dr. Wakeham during the lunch
break
7 about any aspect of his testimony.
8 MR. NUNLEY: Well, I disagree. We've got
9 a -- an 82-year-old gentleman who I think would
like
10 to take lunch now. We're all trying to get out of
11 here on a Friday afternoon. I think we can be
more
12 efficient if I get a chance to have some time with
my
13 documents between now and when we do this. And I
14 know that the gentleman from CTR has said that he
15 hasn't had a chance to even look at the documents.
16 It is -- although we did agree for a noon lunch
17 break, it's now 11:40. So I don't see the harm in
18 taking a break and it's our intention to do it,
and
19 we're prepared to come back at 12:45.
20 MR. GORDON: Mr. Nunley, are you prepared
21 to stipulate that during this lunch break you will
--
22 neither you nor anyone else representing Philip
23 Morris will have any discussions with Dr. Wakeham?
24 MR. NUNLEY: No, I'm not prepared to
25 stipulate that.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

294
1 MR. GORDON: Okay. So in other words
2 you're -- you're intending to prepare Dr. Wakeham
for
3 your examination in this break that you're
insisting
4 on taking early; correct?
5 MR. NUNLEY: That is incorrect, Mr.
6 Gordon.
7 MR. GORDON: Well Dr. Wakeham is still on
8 the witness stand, and it's our position that your
9 insistence on a -- a break as you're now claiming
so
10 that you can review your documents, if that's what
it
11 is, then you should be willing to stipulate that
you
12 won't be discussing Dr. Wakeham's testimony during
13 this break while he's on the witness stand.

14 MR. NUNLEY: I understand -- I understand
15 your position. I think asking for that type of
16 stipulation is inappropriate.
17 We're going to take a break and we'll be back at
18 12:45.

19 MR. GORDON: Okay. At 12:45? We agreed
20 yesterday it would be a 45-minute break.

21 MR. FALKENSTEIN: Well let me add to this
22 before we discuss any time. I'm going to take the
23 time that I need to review the documents I haven't
24 seen. I was not given a copy before. One
document

25 in particular is sizable; I haven't digested it,
and

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

295

1 I'm not prepared to ask my questions at this time
and

2 I may not be prepared in 45 minutes or 50 minutes,
3 but I'm going to ask my questions when I'm
prepared

4 regardless of how much time is taken for lunch. I
5 hope to ask them today.

6 MR. GORDON: Well CTR, as -- as with every
7 other defendant, got a pre-designation. If CTR
had

8 any concerns about its ability to be prepared for
9 this deposition, it should have expressed them
before

10 now.

11 We will take a 45-minute lunch break, as agreed
12 upon by the parties, and we are doing it now under
13 protest by the plaintiffs. And I note that it is

--
14 that it is plaintiffs' position that you -- you,
15 Philip Morris lawyers, should not be consulting
and
16 discussing Dr. Wakeham's testimony with him during
17 this break. And I just note for the record that
you,

18 Mr. Nunley, are insisting on this break now before
19 you conduct your examination of Dr. Wakeham, and
you
20 are refusing to agree not to -- not to discuss the
21 subject of Dr. Wakeham's testimony with him during
22 this break.

23 MR. NUNLEY: All right. We'll be back at
24 12:30.

25 THE REPORTER: Off the record, please.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

296

1 (Luncheon recess taken at 11:40 o'clock
2 a.m.)
3
4
5
6
7
8

9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

297

1 AFTERNOON SESSION

2 (Deposition reconvened at 1:47 o'clock
3 p.m.)

4 DIRECT EXAMINATION

5 BY MR. NUNLEY:

6 Q. Good afternoon, Dr. Wakeham.

7 A. Good afternoon.

8 Q. I'm Chip Nunley. We're not strangers; we met
9 before and talked. I have some questions for you

on

10 behalf of Philip Morris.

11 A. Yes.

12 MR. NUNLEY: Mr. Gordon, did you want me to
13 make --

14 MR. GORDON: I just want to note for the
15 record that during the lunch break Mr. Nunley and

I

16 met and discussed certain case-management issues
17 unrelated to this deposition, so Mr. Nunley at

least

18 did not consult with Dr. Wakeham during the lunch
19 break.

20 MR. NUNLEY: Mr. Grossi --

21 MR. SILBERT: Well I can state for the
22 record on behalf of Mr. Wakeham, since the issue

has

23 been raised, that Mr. Wakeham during the lunch
24 break --

25 MR. NUNLEY: Doctor.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

298

1 MR. SILBERT: -- Dr. Wakeham, excuse me,
2 consulted only with his personal counsel; that is,
3 Ms. Maher and myself.

4 MR. NUNLEY: Okay.

5 BY MR. NUNLEY:

6 Q. Dr. Wakeham, Mr. Gordon asked you certain
7 questions, background questions about what you did
8 before you came to Philip Morris. I think he

asked

9 you whether you had a Ph.D.
10 Do you have a Ph.D.?
11 A. Yes.
12 Q. Where did you get that Ph.D.?
13 A. Berkeley, California. University of
California
14 at Berkeley.
15 Q. And in what year?
16 A. 1939.
17 THE REPORTER: Just a moment, please.
18 (Discussion off the stenographic record.)
19 BY MR. NUNLEY:
20 Q. You graduated from college, obviously, before
21 you went to Berkeley; is that correct?
22 A. Yes.
23 Q. What college did you go to?
24 A. I went to the University of Nebraska.
25 Q. What year did you graduate from the
University
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

299
1 of Nebraska?
2 A. I got a --
3 I received a bachelor's degree in 1936 and a
4 master's in 1937.
5 Q. And what -- what was your major in undergrad?
6 A. I had a double major in physics and
chemistry.
7 Q. And your master's was in what field?
8 A. Physical chemistry.
9 Q. Physical chemistry.
10 And your Ph.D. at Berkeley?
11 A. Also in physical chemistry.
12 Q. Could -- could you briefly describe for
members
13 of the jury what physical chemistry is the study
of,
14 if that's an appropriate way to -- to ask the
15 question?
16 A. Well physical chemistry involves the study of
17 the physical phenomena connected with substances,
in
18 contrast with organic chemistry, which has to do
with
19 molecular structure and -- and the elements that
make
20 up organic compounds.
21 Q. You got out of Berkeley in '36, did you say?
22 A. No, '39.
23 Q. '39, excuse me.
24 A. Yes.
25 Q. What did you do after you graduated with your
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

300
1 Ph.D. from Berkeley?
2 A. I was a research scientist at the Standard
Oil
3 Company of California in Richmond, California.
4 Q. All right. And how long were you -- were you

5 with Standard Oil?
6 A. Until October 1941.
7 Q. Okay. And what type of work were you doing
with
8 Standard Oil?
9 A. Studying the physical properties of
lubricants,
10 petroleum products.
11 Q. Didn't have anything to do with the tobacco
12 industry?
13 A. No.
14 Q. Okay. When you left Standard Oil in 1941,
what
15 was your next place of employment?
16 A. I was employed as a civil servant in the
17 Department of Agriculture Laboratory in New
Orleans.
18 Q. How long were you in New Orleans?
19 A. As I recall it, I left in 1947.
20 Q. Okay. And briefly what did you do for the
21 Department of Agriculture in New Orleans?
22 A. Well I was in the group known as the physical
23 chemistry section, and we studied
physical/chemical
24 properties of agricultural products which were of
25 interest in that laboratory: cotton, peanuts,
sweet
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

301
1 potatoes. And then when the war came along, we
were
2 working on projects related to the war effort,
which
3 may or may not have involved those particular
4 agricultural commodities.
5 Q. And that took you through '46, did you say?
6 A. It was '46 or '47.
7 Q. Okay. What --
8 When you left New Orleans physically, where did
9 you go next?
10 A. Went to Charlottesville, Virginia.
11 Q. And what were you doing in Charlottesville?
12 A. Well I joined an organization known as the
13 Institute for Textile Technology. I had become
14 fairly knowledgeable and proficient in the
properties
15 of cotton fibers, and the laboratory in
16 Charlottesville was supported by the cotton
textile
17 industry, so they were interested in my expertise
in
18 that field.
19 Q. So you were not working directly for any
20 specific cotton manufacturer there, you were
working
21 for a -- an institute?
22 A. No, I was -- it was an institute sponsored by
23 members of the cotton textile industry throughout
the
24 South.
25 Q. All right. And you were there for how long?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

302

1 A. I believe it was 1949 when I left.

2 Q. Okay. In 1949 you left Charlottesville and

--

3 and moved where?

4 A. Well I moved to New Jersey, and I was a
research

5 associate in the Textile Research Institute,
6 continuing more or less the same line of work that
7 I'd been doing in Charlottesville.

8 Q. Which was work on cotton properties?

9 A. Yes. But then I got involved with other
fibers,

10 both synthetic and natural: wool, nylon,
cellulose

11 acetate, and that sort of thing.

12 Q. When you were at the institute in

13 Charlottesville, were you in a management position
or

14 were you a -- more in a bench-scientist position?

15 A. I was a bench scientist. I had the title of

16 research associate; that means I had maybe one,
two

17 or three assistants.

18 Q. Okay. And then when you moved to the
position

19 in New Jersey, were you again a situation where
you

20 had more of a management responsibility, or were
you

21 doing more bench chemistry?

22 A. Well I was what you might describe as the
group

23 leader of the -- those people who were involved in

24 work on cotton fibers primarily. Sometime in the

25 early '50s I was appointed director of research
for

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

303

1 the Textile Research Institute.

2 Q. Okay. And you held that position, director
of

3 research for the Textile Research Institute --

4 A. Textile Research Institute.

5 Q. -- for how long?

6 A. Until 1956.

7 Q. And while you served as director of the
Textile

8 Research Institute, did you have people reporting
to

9 you?

10 A. Yes.

11 Q. Were they other scientists?

12 A. Yes.

13 Q. What was the approximate size of your staff
14 there?

15 A. Well I'm not sure. Less than 50.

16 Q. Okay.

17 A. We had a number of graduate students and
18 post-docs from Princeton University also working
19 there.
20 Q. You were working in the general Princeton
area?
21 A. Yes.
22 Q. Did you leave the Textile Research Institute
in
23 1956?
24 A. Yes.
25 Q. Where did you go?
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

304

1 A. Well I took a leave of absence to serve as
2 director of the Ahmedabad Textile Industry
Research
3 Association in India.
4 Q. And what was that facility concerned with?
What
5 did it look at?
6 A. Well it was another cotton research institute
7 serving the cotton industry in India, and it was
8 located in Ahmedabad because probably 50 percent
of
9 all the cotton mills in India were in Ahmedabad.
10 Q. And did you go over there by yourself or did
you
11 go in the company of your family? What was your
--
12 A. Well my family went along. I had a two-year
13 contract.
14 Q. Okay. And were you at -- when you were in
15 India, serving as a -- as a bench chemist or were
you
16 more in a management position?
17 A. No, I was in charge of the laboratory, --
18 Q. Okay.
19 A. -- which had -- we had 200, 225 or so
employees
20 at that time.
21 Q. And many of those employees were scientists?
22 A. Quite a large number were, yes.
23 Q. So in -- in the work at the Textile Research
24 Institute and the work that you did with the
25 institute in India, you were doing management type
of
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

305

1 work.
2 A. Yes.
3 Q. Okay. Two years in India, and then I take it
4 you returned to the United States?
5 A. Yes.
6 Q. Where did you come back to when you came to
the
7 United States?
8 A. Well I kept the house in Lawrenceville, where
we
9 lived, which was just outside of Princeton, and I

10 spent three months exploring employment
opportunities
11 mostly in the Princeton area. But I had received
an
12 offer from Philip Morris to join Philip Morris --
13 Q. All right.
14 A. -- when I returned, and I spent some time
15 looking at something which did not involve
commuting
16 into New York City.
17 Q. Did you --
18 A. But finally gave in.
19 Q. All right. Did you commute for a period of
time
20 to New York City?
21 A. While I was with Philip Morris.
22 Q. Yes, sir.
23 A. One year.
24 Q. Okay. I think you testified in response to
25 one -- one of Mr. Gordon's earlier questions that
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

306

1 initially your relationship with Philip Morris was
2 through Benson & Hedges?
3 A. Yes. In -- in 1953, I think it was, Mr. Hugh
4 Cullman, who was at that time a research director,
a
5 technical director at Benson & Hedges, approached
me
6 to work with them as the consultant in the
properties
7 of cotton textile fibers that they were using as a
8 filter in the Parliament cigarette.
9 Q. Prior to the time you joined Philip Morris in
10 1961, had you had -- was this --
11 A. 1958 I joined as an employee.
12 Q. '58, excuse me. Thank you.
13 Prior to that time, joining them in 1958, had
14 you had any involvement in the tobacco industry?
15 A. None other than what I'd experienced at
Benson &
16 Hedges.
17 Q. Okay. And that was working with cotton
filters?
18 A. Well I was working with filters, filtration
19 efficiency, filter quality. They had a testing
20 program going on at the U.S. Testing Institute in
21 Hoboken, I believe it was. Is that in New Jersey?
22 Yes.
23 Q. You mentioned the term with respect to
filters,
24 "filtration efficiency."
25 A. Yes.
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

307

1 Q. Could you tell the jury what you mean by that
2 term?
3 A. Well efficiency would be measured as the
4 fraction of particulate smoke which was being

removed

5 by the filter. And you carried out the test by
6 measuring the amount coming through with and
without

7 a filter, and the efficiency of the filter would
then

8 be based on the portion removed in percent of the
9 total amount of a non-filter cigarette.

10 Q. So is another way of saying that that
filtration

11 efficiency is a way to measure the reduction in
tar

12 and nicotine deliveries based on the filter?

13 A. Yes.

14 Q. Okay. When you came in to Philip Morris in
15 1958, you spent your first year or so in New York
16 City?

17 A. Yes.

18 Q. And then you took a position in the research
19 facility in Richmond?

20 A. Yes. They asked me to go to Richmond to be

--

21 take over the -- or to be -- take charge of the
22 research facility at Richmond.

23 Q. Okay. Did you, when you arrived at the
research

24 facility and subsequent to your arrival there,
25 continue an interest in the use of filters with
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

308

1 respect to the product?

2 A. Yes.

3 Q. Can you for the jury describe the type of
work

4 that Philip Morris had ongoing with respect to
5 filtration during your tenure as head of the

research

6 and development department.

7 A. Well we were interested in filtration

8 effectiveness or efficiency. We were interested
in

9 the question -- certain questions like: Was
10 cellulose acetate the best material to be used in
the

11 cigarette filter from the point of view of
removing

12 part of the smoke stream? Problems relating to
the

13 consistency of efficiency. We were interested in
14 filter design that would increase efficiency. We
15 were interested in filter properties that might
have

16 a bearing on whether or not we could carry out
17 selective filtration; that is, the selective
removal

18 of certain components in the smoke. Problems of
that
19 nature.

20 Q. Were there other product developments that
you

21 oversaw while you were head of the R&D department,

22 Philip Morris?

23 A. Oh, yes. Many.

24 Q. Can you -- I realize --

25 Well maybe as a precursor I should say: You
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

309

1 left the employment of Philip Morris in what year,
2 1982?

3 A. 1982, yes.

4 Q. And have you been involved in other work
outside

5 the industry since 1982?

6 A. Yes. I had some involvement for several
years

7 in a project at the Medical College of Virginia.
And

8 I became involved in the software business, oh,
9 specialized software. There was a third one, and
I'm

10 trying to remember what it was now.

11 I was also a consultant to Philip Morris at the
12 same time.

13 Q. Going back to the types of product
development

14 changes that were being looked at at the company,
15 Philip Morris, in the '60s, can you for the jury
list

16 what some of those were? You mentioned filtration
17 efficiency. Were there others?

18 A. You mean what kind of projects we had in --

19 Q. Yes, sir.

20 A. -- our program?

21 Well we had a major program going on to identify
22 chemicals in smoke. This was in the early days of
23 smoke analysis. We developed tools that would
enable

24 us to determine smaller and smaller quantities of
25 materials in the smoke stream. And we recognized
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

310

1 that while there had been at that -- at the point
2 when I started something like two or three hundred
3 constituents that had been listed as being in
smoke,

4 that there were probably many more, maybe several
5 thousand, and so we had an extensive program just
to

6 determine the composition of smoke.

7 Q. You are familiar with the term "ventilation?"

8 A. Yes.

9 Q. What is ventilation? What does ventilation
mean

10 with respect to the design of cigarettes?

11 A. Ventilation, in effect, involved mechanisms
12 whereby you dilute the smoke stream with air in
the

13 course of puffing the cigarette.

14 Q. And what is the impact on the delivery of tar
15 and nicotine to the smoker using ventilation?

16 A. Well the smoker, who is taking in a certain
17 volume of smoke, if you please, if he's now
smoking a
18 ventilated cigarette, he's taking in more air and
19 less of the products of combustion from the
cigarette
20 and the nitrogen that's left over after the oxygen
is
21 used in the combustion process, so he's in effect
22 diluting his smoke with air.

23 Q. Okay. Are you familiar with the term
"expanded

24 tobacco?"

25 A. Yes.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

311

1 Q. Was --

2 Well first of all, can you tell the jury what
3 expanded tobacco is?

4 A. Well the -- the tobacco leaf, as it grows and
as

5 it's harvested, is what we call a turgid leaf; it
has

6 a lot of water in it, maybe 85, 90 percent water.

7 And in the curing process the tobacco leaf is
dried

8 out, and the cells in the leaf -- the leaf being a

9 botanical product composed of cells -- shrink down
to

10 much smaller size. And we explored the
possibility

11 of re-expanding the leaf by various means so that
the

12 cells now become larger, and we could make a

13 fully-packed, round, firm cigarette with less
organic

14 tobacco material in the leaf -- in -- in the

15 cigarette by using expanded tobacco as compared to

16 using the straight dried, cured leaf as it came
from

17 the farm.

18 Q. So the jury will understand, the raw
materials

19 for the expanded tobacco is tobacco leaf.

20 A. Yes.

21 Q. And it is expanded in a -- in a -- in a way
that

22 roughly is similar to -- well strike that.

23 The product of the expansion is in some ways

24 comparable to puffed rice?

25 A. Yes.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

312

1 Q. Okay. And what is the impact on the delivery
to

2 the smoker of tar and nicotine if you use expanded

3 tobacco in a cigarette as opposed to lamina or
leaf

4 tobacco?

5 A. Well if you use expanded, or puffed tobacco
if
6 you please, there was -- would be less organic
matter
7 in the tobacco portion of the cigarette, and the
8 lower the quantity of organic matter that's there,
9 the less of the, quote, tar material would be
10 produced in the smoke stream and come back to the
11 smoker.
12 Q. Okay. The -- the work that you -- that the
13 research department was doing at Philip Morris on
14 ventilation, was -- were vent --
15 Was ventilation as a technique employed in
16 Philip Morris cigarettes?
17 A. I believe so, yes, from first I knew of it
when
18 I joined the company.
19 Q. Okay. And was filtration -- or Philip Morris
20 products filtered?
21 A. Yes.
22 Q. Okay.
23 A. There were filter products which they
marketed.
24 Q. Okay. And does Philip Morris use expanded
25 tobacco in the cigarettes that it -- well strike
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

313
1 that.
2 Once Philip Morris developed the expansion
3 process, did it use expanded tobacco in its
products?
4 A. Yes.
5 Q. Now was the result of using ventilation and
6 filtration and expanded tobacco that Philip Morris
7 was able to lower nicotine and tar deliveries in
its
8 products?
9 A. Yes.
10 Q. Okay. And are those --
11 Mr. Gordon asked you earlier about items that
12 you had on your plate when you were at Philip
13 Morris. Are those some of the types of items that
14 you had on your plate when you were at Philip
Morris?
15 A. Those were some of the items, yes.
16 Q. Okay.
17 MR. NUNLEY: Those are all the questions I
18 have. Thank you, Dr. Wakeham.
19 THE REPORTER: Let's go off the record,
20 please.
21 (Discussion off the record.)
22 MR. GORDON: I just want to note for the
23 record that we are resuming now after about a half
an
24 hour delay from the time Mr. Nunley completed his
25 examination to the time counsel for CTR has
returned
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

1 to the room to conduct CTR's examination, and I --
I
2 want to note for the record that plaintiffs
3 vigorously object to the -- the extent of this
delay
4 and want to put all defense counsel on notice that
in
5 future depositions, if you're not prepared to
conduct
6 a cross-examination, then we're going to ask the
7 deposition be concluded.
8 Go forward. Go ahead.
9 MR. FALKENSTEIN: Without getting into
10 arguments that have already been hashed and
rehashed,
11 it would be nice if counsel didn't make
12 representations that he was -- that he was done
with
13 a certain line of questioning and then in fact re
--
14 then in fact re-question the witness and
reintroduce
15 documents that he said he wasn't going to. But
that
16 was something that he said off the record and it's
17 obviously not -- not preserved on the record.
18 CROSS-EXAMINATION
19 BY MR. FALKENSTEIN:
20 Q. Good afternoon, Dr. Wakeham.
21 A. Good afternoon.
22 Q. You saw some documents previously and -- and
had
23 perhaps been questioned about the issue of the
24 relevance of -- of CTR research with respect to
25 tobacco and health. Do you recall some of those
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

315
1 documents?
2 MR. GORDON: Object, move to strike the
3 comment.
4 A. Well over a period of 20 years there may have
5 been some documents that discussed CTR.
6 Q. And --
7 A. So there would be numerous documents.
8 Q. Over the past day and a half or the past two
9 days of the deposition, were you shown documents
that
10 related to the issue of the relevance of -- of
11 tobacco and health and CTR's research program?
12 A. I think so, but I don't recall the specific
13 documents.
14 Q. Okay. Let me ask you the question, doctor:
15 During the period with which you were with Philip
16 Morris, what did -- what did the -- the term
17 "relevance to tobacco and health research" mean to
18 you? Or let me rephrase. What did the --
19 What did the term "research related to tobacco
20 and health" mean to you?
21 A. Well as I recall it, that all aspects of
smoking
22 and health, particularly the cancer issue, which

was

23 the primary issue at the time that the -- that I
came

24 into the industry, and I believe at the time that
The

25 Council for Tobacco Research or the TIRC was
formed,

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

316

1 the -- the major -- the major focus of the
interest

2 was in the question whether or not smoking caused
3 lung cancer.

4 Q. Did all scientists agree with your
perspective

5 on what relevance -- on what relevance to tobacco
and

6 health was?

7 A. All scientists? Astronomers included?

8 Q. To the best of your knowledge, of course.

9 A. No, I don't have any idea or any evaluation
of

10 that particular point.

11 Q. Were there scientists in -- in the industry
or

12 were there scientists at CTR who differed from
your

13 perspective of what relevance to tobacco and
health

14 research was?

15 A. I can't answer that. I don't know. I don't
16 know the answer to that question.

17 Q. If it -- if it were up to you to have --
strike

18 that.

19 What types of research would you have conducted
20 to -- to get at what you thought was the basic
issue,

21 linking tobacco use and health?

22 A. Well --

23 Q. Can you summarize it?

24 A. That's a speculative question.

25 Q. Yes.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

317

1 A. I came into the industry as a fiber expert
and a

2 physical chemist, knowing little or nothing about
the

3 intricacies of research relating to smoking and
4 health and particularly cancer and health, so I'm

not

5 sure I can answer that question.

6 Q. Are you familiar with the term "basic
research?"

7 A. Well yes. That's a common bit of terminology
8 that's used in the scientific field.

9 Q. Do you know if there are scientists who

10 believed, since the time that you were with Philip

11 Morris, that basic research was the proper or most
12 effective way to get at the answers to the
question
13 of the relationship between tobacco use and -- and
14 health?

15 MR. GORDON: I object to the form.

16 Q. Let me rephrase.

17 Did you believe during the time that you were
18 with Philip Morris that basic research was the
most

19 effective way to get at the issues of the
20 relationship between tobacco usage and -- and
21 health?

22 MR. GORDON: Same -- same objection.

23 A. Well I -- I don't think that that's a
question

24 that has a simple answer. In the first place, one
25 has to define what is meant by "basic research"

as,

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

318

1 for example, in contrast to applied research or
2 industrial research. In my understanding the term
3 "basic research" refers to fundamental, basic
4 knowledge without concern whether it bears on the
5 practical question or a practical application.

And

6 now if you're referring to basic research in terms
7 of, let's say, for example, studies of the

chemistry

8 of the cell or the chemistry of reaction between a
9 chemical and a cell as basic research as related

to

10 the issue of whether smoking does or does not
cause

11 cancer, then I would say, yes, that would be basic
12 research. And as -- my understanding was that

that

13 was the kind of thing that was being done by the
14 Tobacco Industry Research Committee or the CTR.

15 Q. Do you recall, doctor, whether there were
16 individual scientists at CTR who had a different
17 approach than you to getting at the questions of
18 tobacco usage and their effects on health?

19 A. No, no. You -- the -- the --

20 The program at this institution/organization was
21 the grant program which would -- was administered
by

22 a Scientific Advisory Board, and that was composed
of

23 scientists who were expert in the field, most of
them

24 medical people, and they made evaluations of
research

25 proposals, most of which came from medical

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

319

1 institutions or universities, and decided which of
2 those deserved financial support for their

3 researches.
4 MR. GORDON: Move to strike as
5 non-responsive.
6 Q. Doctor, do you recall whether there were
grants
7 funded by the Scientific Advisory Board which you
8 perceived to be irrelevant to the issue of tobacco
9 use and health?
10 A. Well let me say that when I first became
11 somewhat acquainted with the program I had some
12 con -- doubts as to whether the things that I
learned
13 about were relevant to the question of whether or
not
14 smoking caused cancer, and I later, let's say,
15 changed over to the point of view that maybe some
of
16 the things which initially I thought were not
17 relevant probably really did have some bearing on
18 it. But that was because my own knowledge of the
19 mechanisms or potential mechanisms or hypotheses
was
20 expanded so that I gradually came to understand
more
21 about the program.
22 Q. Doctor, are you saying that perhaps there
were
23 some members of the SAB that understood this --
24 understood this research to be relevant before you
25 did?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

320

1 A. I believe so.
2 MR. GORDON: Object to form.
3 (Discussion off the stenographic record.)
4 A. Well their -- they --
5 They were much more intimately related. For
6 example, there were people there who were experts
in
7 changes in DNA and they were doing work in this
field
8 when I came in. I didn't even know what DNA was.
9 And later on I became better acquainted with the
10 field and I decided that, well, maybe they had a
--
11 an appropriate approach to a problem or the
problem
12 where at the beginning it didn't seem appropriate
to
13 me.
14 MR. GORDON: Move to strike as
15 non-responsive.
16 Q. At a certain point in time, doctor, though,
17 there was a difference between what you perceived
18 would be research relevant to the issue of tobacco
19 and health and the perspective of the S -- of S --
of
20 certain SAB members as to what would be -- what
would
21 be relevant to getting at questions of tobacco and
22 health?

23 A. Well the -- the --
24 At the beginning the whole question of relevance
25 was something that I personally was concerned
about.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

321

1 And it was out of context with regard to the
program

2 of CTR, it was in the context of my own view of
the

3 whole problem of smoking and health. Sometime
after

4 CTR evolved they were, as I understand it, getting
5 more and more proposals than they could handle or
6 fund, and they themselves set up some kind of a
7 procedure for rating relevance.

8 Q. Was it your --

9 Is it your recollection now that CTR strictly
10 followed your thoughts and recommendations for
what

11 would be relevant research?

12 A. No. I --

13 My function did not involve influencing the
14 Scientific Advisory Board or CTR with regard to
15 relevance at all, in such limited contact as I had
16 with CTR.

17 Q. Doctor, do you recall the document that was
18 shown to you yesterday entitled "'Best' Program
for

19 CTR?"

20 MR. SILBERT: Do you have an exhibit
21 number?

22 MR. FALKENSTEIN: I do. It's Exhibit 144.
23 The Bates stamp's already on the record, but it's
24 20222 --

25 MR. SILBERT: I just need the Bates --

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

322

1 I just need the number so that the witness can
2 see it.

3 MR. FALKENSTEIN: Sure. Bates stamp again,
4 2022200161 through 63.

5 (Discussion off the stenographic record.)

6 BY MR. FALKENSTEIN:

7 Q. I think this --

8 Are you ready, doctor?

9 A. Yes.

10 Q. Okay. I think this may be a "yes" or "no"
11 question, but: Do you have any information that
12 would lead you to believe that your
recommendations

13 as set forth in this document were adopted by CTR?

14 A. I have no -- no reason to believe that they
15 were.

16 Q. Okay. Doctor, to your knowledge did anyone
at

17 Philip Morris ever compel a CTR grantee to alter
18 their methodology?

19 A. I have no knowledge of anything like that.

20 Q. Doctor, did you ever compel a CTR grantee to
21 alter their methodology?

22 A. No, sir.

23 Q. Did anyone at Philip Morris ever compel a
24 grantee to alter their research findings?

25 MR. SILBERT: To his knowledge?

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

323

1 MR. FALKENSTEIN: To his knowledge.

2 A. To my knowledge? No.

3 Q. Did you ever compel a CTR grantee to alter
their

4 research findings?

5 A. No.

6 Q. And doctor, to your knowledge did anyone at
7 Philip Morris ever compel a grantee to conceal
8 research findings?

9 A. I have no knowledge of that.

10 Q. Did --

11 And did you, sir, ever compel a CTR grantee to
12 conceal any of their research findings?

13 A. Not to my recollection. My -- my function
with

14 CTR was basically that of the research directors
15 sitting with the Scientific Advisory Board on a
16 rotating basis, the research -- company research
17 directors, to answer questions relating to smoke
18 chemistry and the generation of smoke and things
that

19 were of that nature, to help them in their design
of

20 the program for the CTR research program.

21 Q. Did you have the power --

22 A. In other words, I was present as a -- as kind
of

23 an expert in the field, not to advise them with
24 regard to their research.

25 Q. And to your knowledge did you ever compel
anyone

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

324

1 on the SAB to fund a project?

2 A. No. I --

3 You're using the word "compel." To compel
4 implies that I have some way of forcing them to do
5 something. That was never my relationship with
the

6 CTR at any time.

7 Q. And also, more specifically, was it the
nature

8 of your relationship with the SAB?

9 A. It was to sit in the meeting and, when asked
a

10 question about the generation of smoke for an
11 inhalation, for example, the question might be of
the

12 nature "What, in your opinion, is the best way to
13 generate representative smoke which might be used
to

14 expose animals in an inhalation experiment?"
15 Q. Also is it --
16 To the best of your knowledge, doctor, did
17 anyone at Philip Morris exert control or compel
any
18 of the SAB members to --
19 A. Not to my knowledge.
20 Q. Okay. Let me just complete the -- complete
the
21 question.
22 A. I'm sorry.
23 Q. No, that's okay. To make sure that -- that
--
24 that your answer is -- is in response to my
question.
25 To your knowledge, did anyone at Philip Morris
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

325

1 compel any SAB member to fund a particular
project?
2 A. Not to my knowledge.
3 Q. Did anyone at Philip Morris compel any member
of
4 the SAB not to fund a particular grantee?
5 A. Not to my knowledge.
6 MR. FALKENSTEIN: Okay. Thank you,
7 doctor. I have no further questions.
8 MR. GORDON: I just have one or two
9 followup questions, Dr. Wakeham.
10 RE CROSS-EXAMINATION
11 BY MR. GORDON:
12 Q. In Mr. Nunley's examination, he mentioned
three
13 things that affected delivery that you had done
some
14 work on: ventilation, expanded tobacco, and
15 filtration. Do you -- do you recall that
testimony?
16 A. Yes, sir.
17 Q. Okay. And you said that all three,
ventilation,
18 expanded -- use of expanded tobacco, and
filtration,
19 would reduce the delivery of a cigarette; correct?
20 MR. SILBERT: Well are you --
21 A. Yes.
22 Q. Okay. And when --
23 When you say "reducing the delivery," you're
24 saying if you take a given rod of tobacco and
measure
25 its delivery before you include filtration,
expanded
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

326

1 tobacco, and --
2 A. Ventilation.
3 Q. -- ventilation, it will have -- the -- the
4 before-and-after deliveries will be different and
the

5 ventilation, expanded tobacco, and filtration will
6 reduce the delivery.
7 MR. FALKENSTEIN: Objection as to form.
8 Q. Correct?
9 A. You used the term "wad of tobacco," and --
10 MR. SILBERT: I think -- I think, in all
11 fairness, I think he used the word "rod."
12 MR. GORDON: "Rod."
13 THE WITNESS: Oh, "rod." Excuse me.
14 MR. NUNLEY: Corey, you may want to move
15 down here so Dr. Wakeham can hear you.
16 THE WITNESS: I thought you said "wad," and
17 that puzzled me a little bit.
18 MR. GORDON: No.
19 A. No. In a tobacco rod in a standard test, for
20 example, to find the effect of ventilation, you
would

21 make a prototype or test cigarette with or
without,
22 for example, porous paper, and then you would
compare
23 the delivery of those two cigarettes in the
standard
24 test under the standard conditions.
25 Q. Okay. And for the -- an actual smoker, if
they

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

327
1 were to take the rod of tobacco that hadn't been
2 subject to filtration and expanded tobacco and
3 ventilation, and they were to -- to inhale it and
get
4 a certain delivery, if they then switched to a rod
5 that had ventilation, filtration, and expanded
6 tobacco and they were to suck it harder or inhale
it
7 deeper or hold it longer, they would be getting
more
8 delivery than the standard test would have shown
for
9 the difference between those two cigarettes;
10 correct?
11 MR. NUNLEY: Objection as to form.
12 A. Well -- well that's kind of conjecture. I
think
13 in general if they had changed their smoking
pattern,
14 then they would experience a -- a difference of
the
15 type which you described. For example, if you
16 compared a non-filter with a filter cigarette, a
17 person who was accustomed to smoking a non-filter
18 cigarette now trying to smoke a filter cigarette
19 would find that he was not getting nearly the
taste
20 or delivery impact that he had been accustomed to
21 getting, so he might smoke the filter cigarette
with
22 larger puffs or stronger puffs or puffs with
greater
23 velocity in the -- in generating the smoke.

24 Q. And those three things that you were working
on,
25 the filtration, the ventilation --
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

328

1 A. Yes.
2 Q. -- and the expanded tobacco that had the
3 potential to reduce delivery in machine tests, --
4 A. Yes, yes, yes.
5 Q. -- all of those things would not change the
6 delivery that a smoker got if the smoker inhaled
7 more, inhaled longer, puffed deeper; --
8 A. Well it was --
9 Q. -- correct?
10 A. Yes. Well there are probably limitations on
how
11 much he could compensate or adjust for the change
in
12 the cigarette. For example, if he were smoking a
13 cigarette in days when a non-filter was delivering
35
14 milligrams of tar and then he compared that with,
15 say, what we produced later on in a Merit or a
16 Marlboro cigarette with 12 or 15 milligrams of
tar,
17 he would certainly notice a difference. But it's
18 doubtful that he could smoke the filter cigarette
19 with puff -- with a larger puff or with a greater-
20 velocity puff or whatever to bring himself up to
the
21 standard of the non-filter cigarette; that would
be
22 probably fairly difficult for the smoker to do.
23 And I think the point here is that smoking --
24 the smoking pattern, the smoking behavior has much
25 more to it than simply taking in, quote, tar and
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

329

1 nicotine, unquote. It involved the psychosocial
2 aspects which have been studied and involved the
3 manner of -- of the person smoking and -- and all
4 these other variables. So the smoking pleasure or
5 experience was much more involved than simply
taking
6 in tar and nicotine in the smoke stream.
7 MR. NUNLEY: Objection, move to strike as
8 non-responsive.
9 Q. You were asked a series of questions about --
10 MR. NUNLEY: Corey, if you don't mind, if
11 you're going to have any more, do you mind sitting
12 down so you don't stand up over the witness?
13 MR. GORDON: I have one more question, and
14 there's only -- there's no chair near him.
15 MR. FALKENSTEIN: Do you want to sit here?
16 MR. GORDON: I just have one more
17 question.
18 BY MR. GORDON:
19 Q. The counsel --
20 Do you remember the questions counsel was asking

21 you about the CTR grants from the Scientific
Advisory
22 Board? Do you remember that line of questioning?
23 A. Yes.
24 Q. Okay. Did you have any involvement with the
25 special projects done by CTR?
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

330

1 A. No, sir.
2 MR. GORDON: Okay. I have no further
3 questions.
4 Anything else?
5 (No response.)
6 MR. GORDON: This concludes --
7 MR. SILBERT: Well --
8 MR. GORDON: Oh, I'm sorry.
9 MR. SILBERT: Yes.
10 REDIRECT EXAMINATION
11 BY MR. SILBERT:
12 Q. Doctor, my name is Earl Silbert and, together
13 with Patricia Maher, I'm representing you in this
14 deposition. I would like to ask you very, very
few
15 questions.
16 Can you tell the ladies and gentlemen of the
17 jury or estimate what the approximate size of the
18 research and development department at Philip
Morris
19 was when you became the head of research in, I
20 believe, 1959?
21 A. Yes.
22 Q. And what was that size?
23 A. A hundred to one hundred ten persons, as I
24 recall it.
25 Q. And during the course of your tenure as both
STIREWALT & ASSOCIATES
P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

331

1 director of research and development and then
2 vice-president, can you describe for the ladies
and
3 gentlemen of the jury the growth, if any, of the
4 research and development department under your
5 supervision?
6 A. Well by the time that I handed over the
7 administration of the department in 1976, I
believe
8 we had a staff of about 600 people.
9 Q. And in the course of your experience as
director
10 of research and development and vice-president of
11 research and development, did you submit budgets
or
12 requests for budget allocations to the management
of
13 the company?
14 A. Yearly.
15 Q. And --
16 A. Yes, yearly.
17 Q. And what was the response of the management

of

18 the company to your requests for -- to your budget
19 requests?

20 A. They approved them and gave me the money I
21 needed -- that I felt I needed to run the
department.

22 Q. Did they ever turn you down during the course
of

23 your tenure as director of research and
development

24 and vice-president of research and development?

25 MR. GORDON: Object to form.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

332

1 A. No, they -- they didn't turn me down. They,
in

2 fact, to my -- the best of my recollection, they
3 never even asked me to reduce the budget request.

In

4 fact, one year they even increased it more than I
5 expected.

6 MR. GORDON: Move to strike as

7 non-responsive.

8 Q. Well in response to that last motion, at any
9 time during the course of your tenure as director
of

10 research and development and as vice-president of
11 research and development, did the management of
the

12 company provide you with an allocation that was
13 greater -- a budget, a budget or an allocation of
14 funds that was greater than you had requested?

15 MR. GORDON: Objection, leading and
16 suggestive.

17 A. Yes, they increased it in 1964 over what I
18 asked.

19 MR. SILBERT: Thank you very much, doctor.
20 That completes my examination.

21 MR. FALKENSTEIN: I just have one comment
22 for the record, which is --

23 MR. GORDON: Are we done with the
24 questioning? I just want to be sure everyone's
25 done.

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

333

1 (No response.)

2 MR. GORDON: Okay.

3 MR. FALKENSTEIN: Which is just that we
4 reserve our right to renote the witness for
5 deposition.

6 MR. GORDON: This concludes the State of
7 Minnesota and Blue Cross and Blue Shield of
Minnesota

8 versus Philip Morris, et al's deposition of Dr.
9 Wakeham. The State of Minnesota and Blue Cross
Blue

10 Shield will be departing the room, and any further
11 examination, if there's any -- going to be any,
will

12 not involve the State of Minnesota.
13 MR. SANDMAN: I want to put something on
14 the record also. I'm assuming that, on behalf of

--
15 First of all, Richard Sandman on behalf of the
16 Arch plaintiffs in the Pennsylvania action. We
have

17 been here -- or I have been here --
18 (Microphone handed to Mr. Sandman.)

19 MR. SANDMAN: Thank you.
20 I have been here on behalf of those plaintiffs
21 for the last two days, was hoping I would be
afforded

22 an opportunity, if not yesterday, then at least
23 today, to question Dr. Wakeham. It is 2:00
o'clock

24 and it had been indicated that the break would
occur

25 at -- for the day at 2:00 o'clock, and I
understand

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

334

1 that Dr. Wakeham wishes to get back and catch a
train

2 shortly back to Richmond where he resides.

3 Obviously, we have not had an opportunity to
question

4 him. We have extensive questioning prepared. The

--
5 I'd like to actually mark as an exhibit
6 something we can collectively call Arch 1, which
7 consists of a subpoena of Dr. Wakeham to appear
8 today, a notice of deposition which was originally
9 noticed for location at Hunton & Williams in
Richmond

10 before we realized that the deposition would be
11 occurring here, and a letter from Jonathan Shub
from

12 Philadelphia who is one of the plaintiffs' counsel
in

13 this action to Patricia Maher -- I don't know if I
14 pronounced that correctly -- indicating that we
have

15 cross-noticed this deposition as a convenience to
the

16 witness and do not intend to relinquish our rights
to

17 examine him should we not get the opportunity
during

18 this two-day period to question him.

19 We would reserve our rights. During various
20 breaks I have, both yesterday and today, brought
up

21 the need of the Arch plaintiffs to question Dr.
22 Wakeham. I've indicated to Mr. Silbert time
23 constraints that we're under in Pennsylvania, most
24 notably the fact that we have a June 30 discovery
25 deadline and an October trial date. And the

response

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

335

1 I have received is that any deposition -- or
further
2 deposition would have to occur in Richmond. We're
3 agreeable to that.

4 I ask, if possible, that all available dates for
5 counsel and for the deponent be made available to
6 either me or Mr. Shub as early as possible so we
can

7 make arrangements. As -- as counsel knows, we
have a

8 number of other depositions which we're trying to
get
9 in before the June 30 deadline.

10 With that said, I would like to actually mark
11 this and make this an exhibit to the State of
12 Minnesota action, and I will say no more.

13 MR. WEIL: I might just add -- Jeff Weil,
14 who's representing Philip Morris in the Arch case

--
15 that I would ask that my schedule or one of my
16 colleague's schedule also be considered in the
17 rescheduling of this deposition, and that we, the
18 defendants in the Arch case, have no objection to
Mr.

19 Sandman questioning Dr. Wakeham further. But we
20 would urge, as I'm sure he would do on his own
21 anyway, that consistent with the understanding
that
22 we have with regard to cross-noticing, that you
23 carefully review the transcript of the two days of
24 deposition that have already taken place, and we
will

25 object to any questioning -- or any repeat of
STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

336

1 questions that have already occurred, and urge
you,
2 of course, to explore other areas that you think
are
3 relevant.

4 (Arch Exhibit 1 was marked
5 for identification.)

6 THE REPORTER: Off the record, please.

7 (Deposition concluded at 2:09 o'clock p.m.)

8
9

10
11
12
13
14
15
16
17
18
19
20
21
22

23
24
25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

337

1 C E R T I F I C A T E

2 I, Richard G. Stirewalt, hereby certify

3 that I am qualified as a verbatim shorthand
reporter;

4 that I took in stenographic shorthand the
testimony

5 of HELMUT R. R. WAKEHAM at the time and place

6 aforesaid; and that the foregoing transcript

7 consisting of pages 206 through 336 is a true and

8 correct, full and complete transcription of said

9 shorthand notes, to the best of my ability.

10 Dated at Washington, D.C., this 30th day of

11 May, 1997.

12

13

14

15 RICHARD G. STIREWALT

16 Registered Professional Reporter

17 Notary Public

18

19

20

21

22

23

24

25

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953

338

1 C E R T I F I C A T E

2 I, HELMUT R. R. WAKEHAM, the deponent,

3 hereby certify that I have read the foregoing

4 transcript consisting of pages 206 through 336,

and

5 that said transcript is a true and correct, full

and

6 complete transcription of my deposition except:

7

8

9

10

11

12

13

14

15 HELMUT R. R. WAKEHAM

16 Deponent

17

18 Sworn and subscribed to before me this day

19 of , 1997.

20

21

22

23 Notary Public

24

25 My commission expires .

STIREWALT & ASSOCIATES

P.O. BOX 18188, MINNEAPOLIS, MN 55418 1-800-553-1953